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December 2, 2016

Via E-mail and U.S. Mail

Jami Brackin, Esq.
Summit County
60 N. Main Street
P.O. Box 128
Coalville, UT 84017

Re: Silver Gate Ranches Proposed Subdivision, Pace Ranch Property, Park City, UT

Dear Ms. Brackin:

We have attached, for your consideration, (1) a revision to Resort Center Associates' proposed subdivision for the Pace Ranch Property ("Property")(Exhibit 1) and (2) a letter from SAGE Environmental, L.L.C. prepared by Dr. Laurie Goldner (Exhibit 2) that summarizes the extensive sampling on the Property and confirms that the areas that Resort Center Associates ("Resort") proposes to develop lie "outside of the impacted area" of the Richardson Flat Tailings Site Lower Silver Creek ("Site") Operable Unit 2 (OU2) within the meaning of Section II.A of Summit County Ordinance No. 692.

Ordinance No. 692 requires that developers of properties within the overlay zone "obtain a soils study and shall show evidence that the development area is outside of the impacted area *or* shall propose a plan to remediate any environmental problems/violations identified in the study to the satisfaction of UDEQ and EPA. Ordinance No. 692, § II.Ai&ii (emphasis added). The attached revised development plan has been designed based on the soil studies described in Dr. Goldner's letter to assure that the entire development area lies outside of the impacted area. Because the Ordinance uses the disjunctive "or," under the clear words of the Ordinance, there is no need for Resort to remediate or obtain the approval of UDEQ or EPA for a remediation plan for the insignificant areas on the Property outside of the development area that exceed EPA cleanup thresholds.

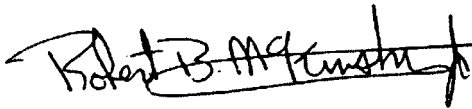
Even if the words of Ordinance No. 692 were not clear, the County should read them in this way in order to prevent an unconstitutional application of the Ordinance. Despite years of effort, neither Resort nor its consultants have been able to obtain EPA or UDEQ approval, or even consideration, of any cleanup plan for the insignificant contamination existing on the Property, but outside of the

Ms. Jami Brackin
December 2, 2016
Page 2

development area. UDEQ will not consider any cleanup plan under its voluntary cleanup program because EPA has the lead in connection with the investigation and possible remediation of OU2. EPA has repeatedly refused to consider studies or cleanup plans by landowners because United Park City Mines ("UPCM"), the party responsible for the contamination, is obligated to conduct the remedial investigation and cleanup under an EPA order. EPA wishes to deal with only UPCM. Resort has already suffered years of delay and considerable financial loss due to EPA's refusal to entertain cleanup proposals. The completion of the studies described in Dr. Goldner's letter has allowed Resort to revise its subdivision plan to assure that all areas to be developed lie outside of the impacted area. Any refusal by the County to issue necessary approvals for Resort's proposed development in this factual situation would constitute an unconstitutional taking.

If you have any questions regarding these issues, we will be happy to meet with you.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert B. McKinstry, Jr.", with a stylized flourish at the end.

Robert B. McKinstry, Jr.

Steven D. Peterson

RBM/set
Enclosures

cc: Walter Plumb, Esq.
Laurie Goldner, Esq.
Amelia Piggott, Esq.

□



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Revision By Appd. YY.MM.DD

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Permit-Seal

Client/Project
WALT PLUMB

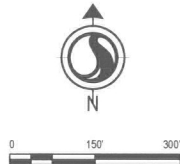
SILVER GATE RANCHES PHASE 2

PARK CITY, UTAH USA

Title
PRELIMINARY LOT LAYOUT

Project No. 205303168 Scale 1" = 80'

Drawing No. 1 of 1 Sheet 0



PROMONTORY
INVESTMENTS, LLC
SS-23

S89°55'31"E
2698.76'

1355.71'
50°23'35"W

EXISTING POND

EXISTING TRACK

702.37' SILVER GATE DRIVE (PUBLIC ROW)

APPROXIMATE
EDGE OF
WETLANDS

APPROXIMATE
EDGE OF
WETLANDS

80' BUFFER

80' BUFFER

V:\2053\Active\205303168.dwg User: J31166...db.dwg
20/07/2022 4:13 PM By: J31166...db.dwg

ORIGINAL SHEET - ARCH D

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Client/Project
WALT PLUMB

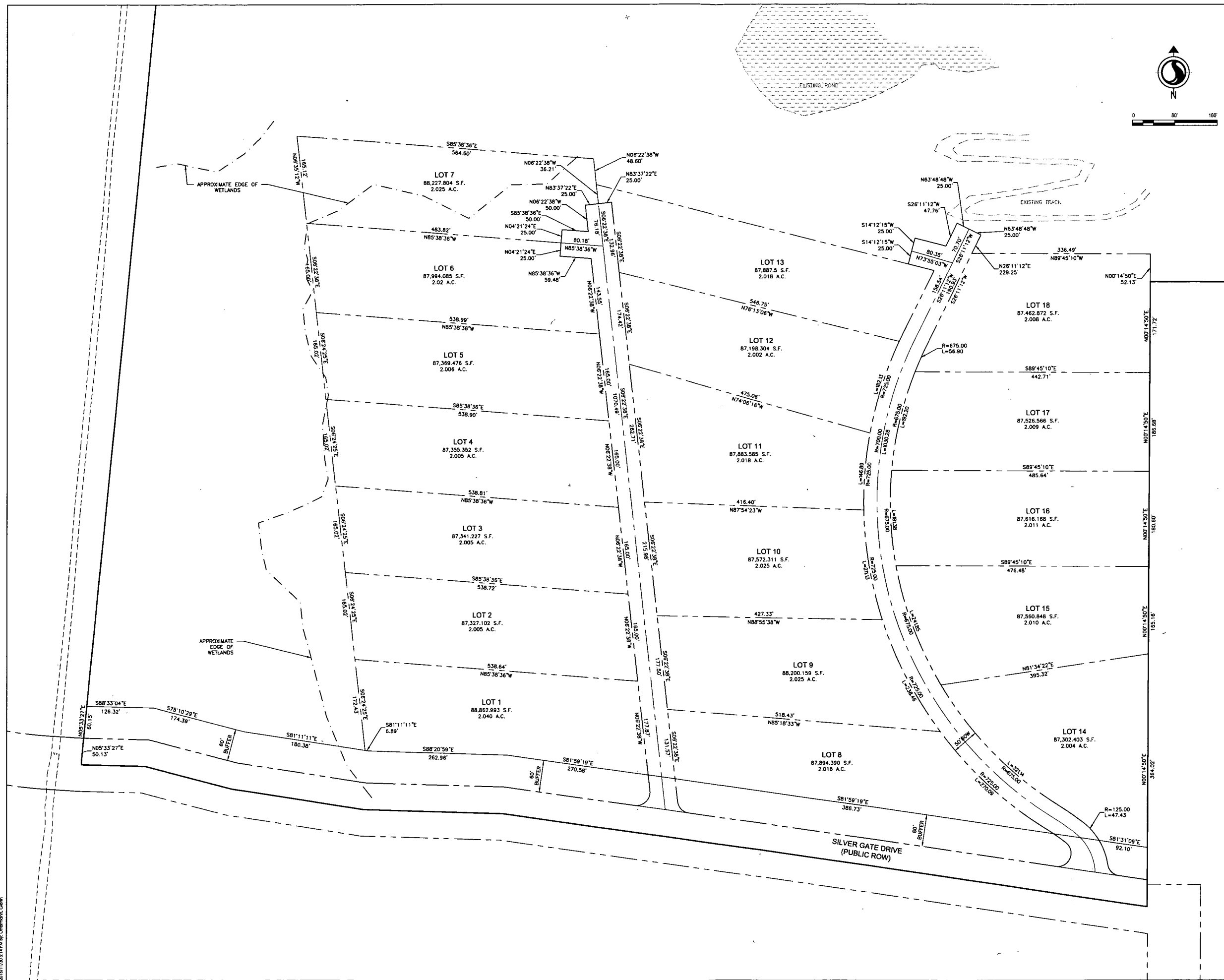
SILVER GATE RANCHES PHASE 2

PARK CITY, UTAH USA

Title
PRELIMINARY LOT LAYOUT

Project No. 205303168	Scale 1" = 80'
Drawing No.	Sheet
	Revision

1 of 1 0



Ms. Jami Brackin
December 2, 2016
Page 3

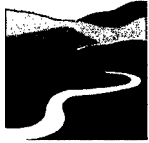
Exhibit 1

Revision to Resort Center Associates' Proposed Subdivision for the Pace Ranch Property

Ms. Jami Brackin
December 2, 2016
Page 4

Exhibit 2

**Letter from SAGE Environmental, L.L.C. and Attached Figures and Reports Summarizing
Sampling Results for the Pace Ranch Property**



SAGE
environmental

phase I • site investigation • risk assessment • remediation
NEPA • permitting • hazardous materials • UST

December 2, 2016

Ms. Jami Brackin
jbrackin@summitcounty.org
Summit County
60 N. Main Street
P.O. Box 128
Coalville, UT 84017

RE: Silver Gate Ranches Proposed Subdivision, Pace Ranch Property, Park City, UT

Dear Ms. Brackin:

The purpose of this letter is to provide Summit County with extensive soil sampling data demonstrating that the areas that Resort Center Associates ("Resort") proposes to develop within the Pace Ranch (the "Property") lie "outside of the impacted area" of the Richardson Flat Tailings Site Lower Silver Creek ("Site") Operable Unit 2 (OU2) within the meaning of Section II.A.i of Summit County Ordinance No. 692. A map showing the boundaries of the approximately 152 acre Property and the preliminary layout for the proposed eighteen lot Silver Gate Ranches development is attached as Figure 1. Resort has been unable to develop its Property for a decade due to Summit County's refusal to process a plat for any property due to EPA's inclusion of the Property within the Site. As described below, the Property has now been the subject of extensive testing and that testing constitutes conclusive "evidence that the development area is outside of the impacted areas." Resort has already lost substantial income as a result of its inability to develop the Property and it is critically important for the company to be able to develop its Property now, while market conditions are favorable. Resort is anxious to resolve this matter without needing to resort to litigation against the County.

BACKGROUND

As shown on Figure 1, the Property lies east and upgradient of the State of Utah Rail Trail and is located entirely outside of the Silver Creek floodplain. Historically, several irrigation ditches that carried water diverted from Silver Creek entered the Property's southern boundary. The Property was originally part of a larger property, the Pace ranch, that extended into the floodplain of Silver Creek. The Pace ranch was established in 1861 and was operated as a dairy farm by the Pace family for over a century. The dairy operation ceased upon the sale to Resort. Since then it has been a cattle and horse operation. Resort discovered the concerns relating to mine tailings in the floodplain as a result of its pre-acquisition due diligence. As a result of that due diligence, all portions of the larger Pace Ranch located within the floodplain were subdivided and transmitted to Park City and Resort never took title to that portion of the ranch. A Phase I Environmental Site Assessment dated August 4, 2004 (Attachment 1), was conducted before RCA's acquisition of the Property and concluded "that no Recognized Environmental Conditions (RECs) are likely to exist on the Property."

As you know, Resort has entered into a Development Agreement with Summit County that permits the development of 18 1+ acre lots on the south of the Property next to Promontory on uncontaminated land. The rest of the Property, including the only areas with any evidence of minimal contamination, will be dedicated as permanent open space that will total over 100 acres and will adjoin the Utah Rail Trail, preserving the open space character of the Trail.

Although the Property was subdivided from all land in the floodplain, we understand that the Property was included in EPA's designation of the boundaries of the Site because it was once a part of that larger property. The inclusion of the Property within the Site triggered Summit County Ordinance No. 692, delaying development for over a decade. As described here, extensive soil sampling has been undertaken on the Property between 2007 and 2015 by Granite Environmental, Inc. (Granite), Tetra Tech, SAGE Environmental, L.L.C. (SAGE) and United Park City Mines (UPCM). This sampling now confirms that no part of the proposed development area exhibits contamination and, in fact, Resort believes that this sampling confirms that no part of the Property has been affected by a release that warrants its inclusion within the Site. Only three small areas show elevated levels of contaminants of concern and these areas are located outside of the proposed development area. These data demonstrate that Summit County should approve the proposed plat without the need for any action by EPA or UDEQ consistent with Summit County Ordinance 692.

SOIL SAMPLING STUDIES

Granite

Granite conducted a two-phased screening level sampling effort in May 2007 for Resort. Copies of the two resulting letter reports are included as Appendix A to the SAGE (2014) report (Attachment 1).

A total of 30 discrete (Granite 2007a) and 2 composite (Granite 2007b) samples were collected from the upper 6 inches of soil or sediment. Samples were collected from four irrigation ditches just inside the southern Property boundary; at each location, a sample was obtained from upgradient of the ditch, from the bottom of the ditch, and from downgradient of the ditch. Surface soil samples were also collected from the southwest corner of the Property near the location of a former corral and a wetland area north of the corral, and from along the western property boundary. One soil sample was collected from outside the southwestern corner of the Property on the State of Utah Rail Trail property.

Samples were analyzed for total 8 RCRA metals by American West Analytical Laboratories of Salt Lake City, Utah using EPA Methods 6010B, 6020, and 7471A. No duplicate samples were collected. Granite did not record the GPS locations of the sampling points, and locations are difficult to discern on the accompanying sample location figure because some sample points/labels are overwritten by others (See Granite 2007a, included as Appendix A to Attachment 1). Analytical results are summarized in Table 1 of SAGE (2014).

Results of the laboratory analysis showed that all surface soil samples collected from within the Property boundaries were below the Lower Silver Creek (LSC) Adopted OU1 soil screening levels of 500 mg/kg lead and 100 mg/kg arsenic. At 540 mg/kg lead, sample A1-SS1 collected from the Rail Trail (off Property) was the only sample that exceeded a screening level.

All irrigation ditch samples were below the LSC Adopted OU1 *sediment* screening levels of 310 mg/kg lead and 100 mg/kg arsenic. A single sample that appears to have been collected from a wetland (B3-SS1; 350 mg/kg) exceeded the LSC adopted OU1 screening level for lead in *sediment*.

Tetra Tech

Tetra Tech, working as the EPA's contractor, conducted extensive soil sampling on the Property in the fall of 2007. Surface soil samples were collected from a total of 39 sampling locations on the Property and analyzed for lead and arsenic. Results of the sampling were presented in the attached Figures 2 and 3 (Tetra Tech Figures 1A and 2A, dated Jan. 18, 2008, obtained from UPCM, June 2014). The maximum reported concentrations in surface soil were 241 mg/kg lead and 13.9 mg/kg arsenic (Figure 2). In addition, subsurface soil samples were collected at four locations on the Property; the maximum reported concentrations were 101 mg/kg lead and 10.2 mg/kg arsenic (Figure 3). All samples were well below the LSC Adopted OU1 soil screening levels of 500 mg/kg lead and 100 mg/kg arsenic.

SAGE

At Resort's request, SAGE collected soil samples on the Property in January 2014. In addition to additional sampling locations along the southern boundary where the irrigation ditches enter the Property and in the southwest corner in/adjacent to a former corral, SAGE also collected several samples from the vicinity of an historic loading dock that had been identified by members of the Pace family (Figure 4). Known as the "Wortley Loading Dock," it had been used in the 1960s to load tailings excavated from the nearby Silver Creek floodplain onto rail cars for shipment to Kennecott for use as furnace flux.

A total of 46 soil and sediment samples were collected on January 29, 2014. Sampling locations were staked and recorded with a Garmin Oregon 450 GPS. Soil samples were analyzed by American West Analytical Laboratories for total lead using EPA Method 6020A; since no Granite or Tetra Tech samples had exceeded the screening level for arsenic, the samples were only analyzed for lead. No duplicate samples were collected. Additional details of sample collection, analysis and results are provided in the *Soil Sampling Report, Silver Gate Ranches Property, April 11, 2014* (SAGE 2014) provided as Attachment 1.

Three samples were collected from each irrigation ditch location: from depths of 0"-2" and 2" - 12" in the bottom of the ditch, and from a depth of 0-6" in the berm on the downgradient side of the ditch (presumably where material had been placed when the ditches were periodically mucked out). Three of the 24 samples collected from the irrigation ditches (designated as "F" to "I" following the nomenclature used in the Granite study) where they entered the southern portion of the Property exceeded the adopted OU1 screening level for *sediment* (310 mg/kg lead). These samples were obtained from the eastern-most (F) ditch (SGR-02 0"-2"; 355 mg/kg),

the G ditch (SGR-03 0"-2"; 1,270 mg/kg), and the H ditch (berm sample SGR-06B 0"-6"; 448 mg/kg) (Figure 5). The feeder for the F and G ditches was destroyed by the construction of a residential development south of the Property in 2007-2008, so those ditches have not carried irrigation water since that time. The other ditches have not been used since 2012. Following EPA-approved UPCM sampling (described below) showing that no soils within the ditch areas exceeded EPA screening levels, the abandoned ditches were filled in late 2016 to eliminate the hazards that the open ditches posed to horseback riders. Therefore, the ditch samples should now be classified as soils rather than sediment, and only the single sample from the G ditch exceeded the adopted OU1 soil screening level of 500 mg/kg lead.

Six wetland samples were collected from the southwest corner of the Property (two depth intervals from three separate locations). Only one sample (SGR-10 0"-2"; 633 mg/kg) exceeded the adopted OU1 screening level for lead in *sediment* (310 mg/kg) (Figure 5).

SAGE also collected six soil samples from the Wortley Loading Dock area on the Pace Ranch property. Four of the six samples contained concentrations of lead that exceeded the adopted OU1 500 mg/kg lead screening level for soil, with a maximum concentration of 1,870 mg/kg (Figure 6).

UPCM

During 2015, UPCM implemented the EPA-approved Sampling and Analysis Plan ("SAP"; UPCM September 5, 2014). On July 29, 2015, UPCM personnel accompanied by Kathryn Cerise (EPA Region 8) and Laurie Goldner (SAGE) field-screened soil using a portable X-ray Fluorescence (XRF) unit and collected surface and subsurface soil samples from the Property for laboratory analysis as specified in the SAP. UPCM provided results of this sampling effort to SAGE in October 2016, including the attached Figures 7 and 8 (UPCM 2016).

Twelve locations where irrigation ditches entered the southern Property boundary were screened using the XRF, and none of the locations exhibited lead concentrations exceeding the LSC Adopted OU1 sediment or soil screening levels (Figure 7). The highest lead concentration reported was 181 ppm, and arsenic was below the level of detection in all samples.

Two locations in the northwest portion of the Property and two locations outside the northwest Property boundary were also screened using the XRF (a total of 11 separate readings; Figure 8). The XRF was used to screen soil from on-Property test pit locations OU2-0-SO-50P and OU2-0-SO-51P prior to the collection of samples for laboratory analysis. An off-Property test pit (OU2-SO-OP1) located west of the Pace Ranch fence line on the State of Utah Rail Trail right-of-way adjacent to the historic Wortley Loading Dock was also screened at four depths using the XRF. The fourth location screened was the floor of a drainage ditch immediately upgradient of loading dock test pit OU2-SO-OP1 (XRF reading #3110). Of these 11 XRF readings, only two from the vicinity of the loading dock on Rail Trail property exceeded the LSC Adopted OU1 soil screening level for lead (XRF reading #3102, surface: 2,658 ppm and XRF reading #3103, 1 ft.: 970 ppm).

Soil samples were collected for laboratory analysis from the two locations specified in the SAP (inside the northwest Property boundary, OU2-0-SO-50P and OU2-0-SO-51P). A duplicate sample was also collected from OU2-0-SO-50P. The field team also collected a set of "opportunity samples" from four depths in the off-Property test pit west of the loading dock (OU2-0-SO-OP1) based on the elevated lead concentrations observed during the XRF screening. The results of the laboratory analyses are shown in red text on Figure 8. The samples collected from the two northern-most locations (OU2-SO-50P and -51P) on the Property were well below the LSC Adopted OU1 soil screening levels for lead and arsenic. The opportunity sample from west of the Loading Dock on the Rail Trail property, OU2-SO-OP1, contained high concentrations of lead and arsenic in the upper foot of soil (maximum concentrations of 9,960 mg/kg lead and 268 mg/kg arsenic), but the underlying soil was uncontaminated.

DISCUSSION

No areas within the parts of the Property proposed as the "development area" exhibit contamination above the applicable EPA screening levels. Although samples from two ditches (F & H) within the proposed development area exceeded the lead screening levels for sediment in the SAGE sampling, the lead levels fell below the soil screening levels, which are the pertinent numbers in the light of the fact that the ditches have been filled. Additional XRF sampling conducted by UPCM around the ditches did not identify any soil that exceeded the soil screening level for lead.

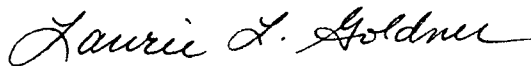
Only three areas of the Property appear to have elevated concentrations of lead exceeding an EPA screening level: the wetland area in the southwest corner of the Property, the former Wortley Loading Dock (Figure 4), and the sample from the bottom of the G ditch, which exceeded the soil screening level. The G ditch has been filled, eliminating any risk of exposure. Two out of the ten samples collected by Granite and SAGE from the wetland area exceeded the OU1 screening level for lead in sediment (Granite sample B3-SS1 at 350 mg/kg and SAGE sample SGR 10 0"-2" at 633 mg/kg). Since only two samples exceeded the screening level, it appears that the elevated concentrations are not indicative of widespread contamination and do not likely pose a significant exposure risk to human or ecological receptors. A localized area of lead and arsenic impacted soil remains in the vicinity of the former Wortley Loading Dock. The highest concentrations (9,960 mg/kg lead and 268 mg/kg arsenic) were found west of the Property line on State of Utah Rail Trail property, with lower concentrations recorded in samples collected from inside the Pace Ranch Property (up to 1,870 mg/kg lead). All three areas lie outside of the proposed development area shown in Figure 1.

CONCLUSIONS

Between 2007 and 2015, a total of 127 soil/sediment samples were collected from the Pace Ranch for laboratory analysis and 23 were field-screened using an XRF. Based on the results of these sampling efforts, the Property has been only minimally impacted by tailings from historic mining operations. All impacted areas fall outside of the proposed development area and will be

a part of the 100 acres of proposed open space. Resort requests that Summit County confirm that it will now proceed with the permitting and development process consistent with Ordinance 692. We will be happy to meet with you to discuss these results further.

Sincerely,
SAGE Environmental, L.L.C.



Laurie L. Goldner, Ph.D.
President/Environmental Scientist

cc: Amelia Piggott, EPA
Walter Plumb III, Resort Center Associates
Steven D. Peterson, Ballard Spahr LLP
Robert B. McKinstry, Jr., Ballard Spahr LLP

References:

Granite. 2007a. *Pace Ranch Soil Sampling for RCRA Metals, Granite Project No. 0356-022*. Letter from Jack Elder to Walter Plumb III. Granite Environmental, Inc., May 24, 2007.

Granite. 2007b. *Results of Composite Sampling, Pace Ranch, Summit County, Utah, Granite Project No. 0356-022*. Letter from Jack Elder to Walter Plumb III. Granite Environmental, Inc., May 30, 2007.

SAGE. 2014. *Soil Sampling Report, Silver Gate Ranches Property*. SAGE Environmental, L.L.C., April 11, 2014.

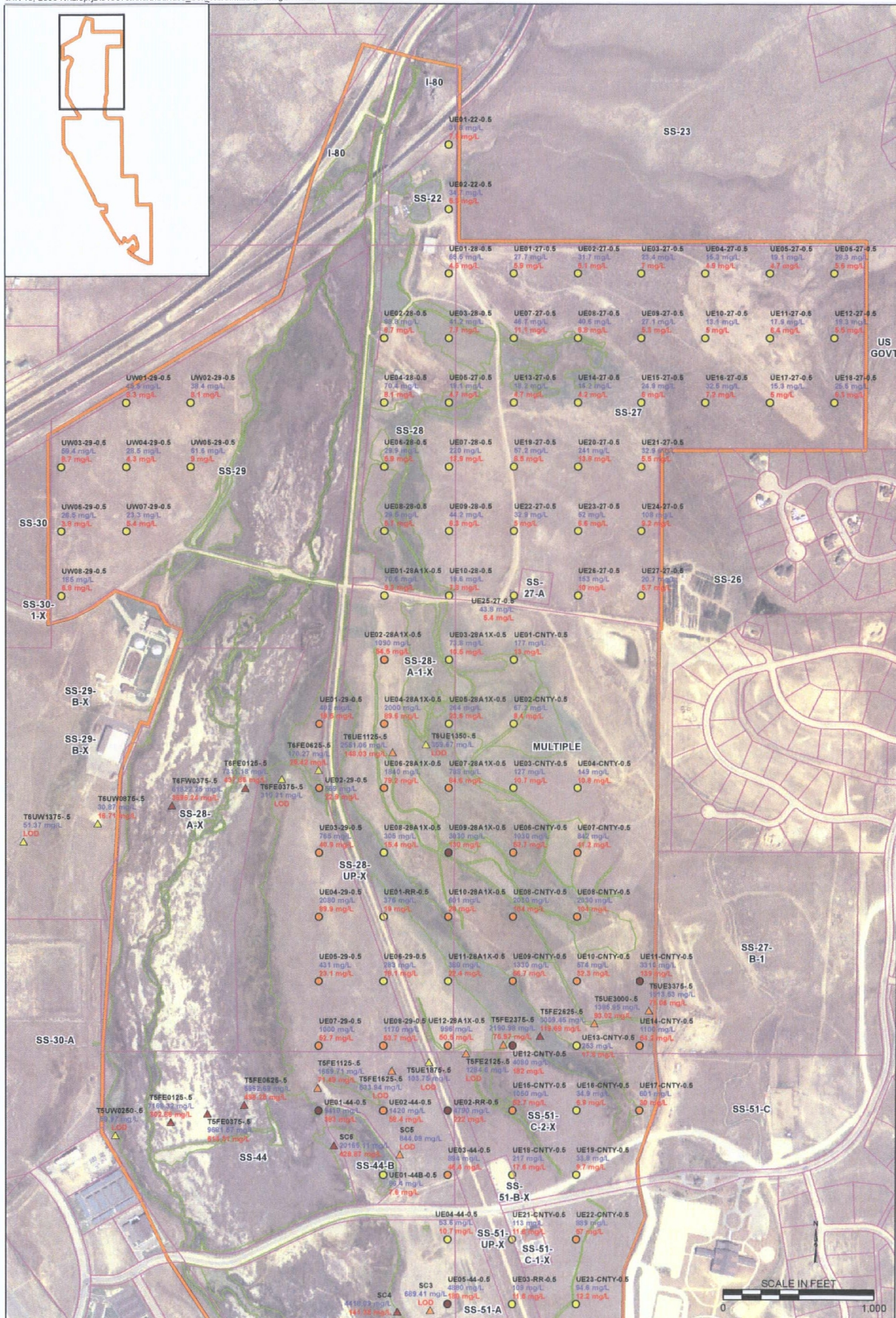
UPCM. 2014. *Tetra Tech figures 1A and 2A (dated January 18, 2008) received from United Park City Mines*, June 2014.

UPCM. 2016. *Data received from United Park City Mines*, October 2016.

Attachments: Figure 1. Silver Gate Ranches (Pace Ranch property) Preliminary Site Plan
Figure 2. Tetra Tech Figure 1A (Tetra Tech, January 18, 2008)
Figure 3. Tetra Tech Figure 2A (Tetra Tech, January 18, 2008)
Figure 4. SAGE Sampling Areas and Vicinity (SAGE 2014)
Figure 5. SAGE South Sampling Areas (SAGE 2014; revised 12/1/16)
Figure 6. SAGE North Sampling Areas (SAGE 2014; revised 12/1/16)
Figure 7. UPCM 2015 Sampling Results, Southern Pace Ranch
Figure 8. UPCM 2015 Sampling Results, Northwestern Pace Ranch
Attachment 1. *Soil Sampling Report, Silver Gate Ranches Property, April 11, 2014*, SAGE Environmental, L.L.C.

FIGURE 2

JAN 18, 2008 N:\arprj2\010379\mxd\Surface_Soil_North.mxd BY megan wood



Note: Phase I samples were analyzed by X-Ray Fluorescence.

Phase II samples were analyzed by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) and/or Inductively Coupled Plasma-Mass Spectrometry (ICP-MS).

Legend

Phase I Surface Soil Samples

Lead (mg/kg)

- ▲ 13 - 400
- ▲ 401 - 3000
- ▲ 3001 - 63123

Phase II Surface Soil Samples

Lead (mg/kg)

- < 400
- 400 - 3000
- > 3000

Study Boundary

Parcel Boundaries

Wetlands Delineation

Pb Conc. mg/kg

As Conc. mg/kg

LOD = Not detected above the Limit of Detection

JAN 18, 2008

FIGURE 1A

SURFACE SOIL SAMPLING RESULTS

SILVER CREEK 010379X





JAN 18, 2008 N:\arcprj\2\010379x\mxd\SubSurface_Soil_North.mxd BY:megan.wood



JAN 18, 2008

FIGURE 2A



-  Phase I Subsurface Soil Samples
-  Phase II Subsurface Soil Samples
-  Phase II Test Pits
-  Study Boundary

Parcel Boundaries
Wetlands Delineation

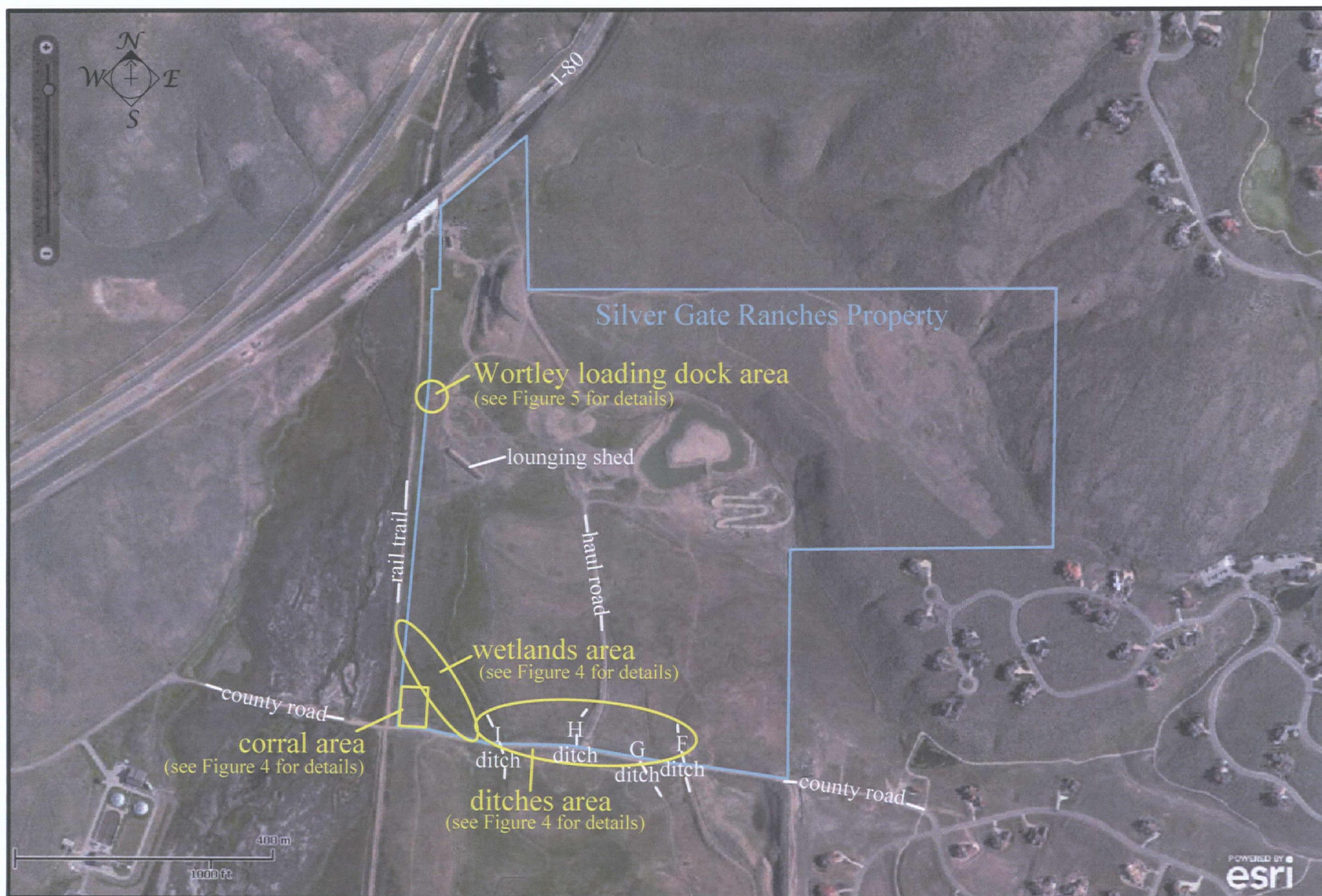
LOD = Not detected above the Limit of Detection
U = Not detected above the Practical Quantitation Limit

Sample Id	Pb(mg/kg)	As(mg/kg)
-----------	-----------	-----------

SUBSURFACE SOIL SAMPLING RESULTS
SILVER CREEK 010379X

SILVER CREEK 010379X

FIGURE 4



Legend:

2014 Sample Areas

Silver Gate Ranches Property Boundary

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 1
Sampling Areas
and Vicinity





Legend:

○ 2014 Sample Areas

Soil Samples
Lead (mg/kg)
● ≤ 500
● > 500

Sediment Samples
Lead (mg/kg)
● ≤ 310
● > 310

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 4
Soil Sample Locations
South Sampling Areas
(revised 12/1/16)



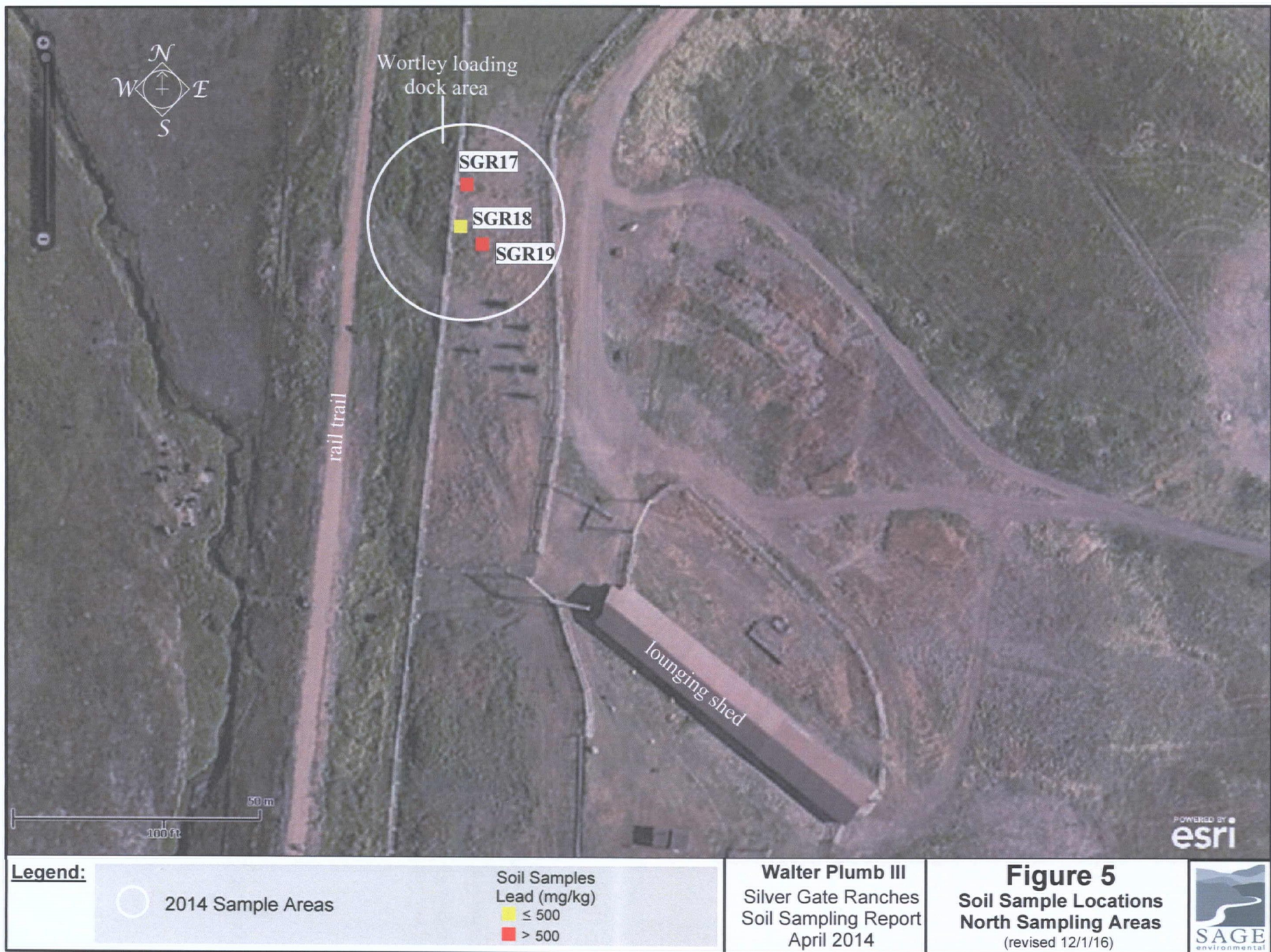


FIGURE 6

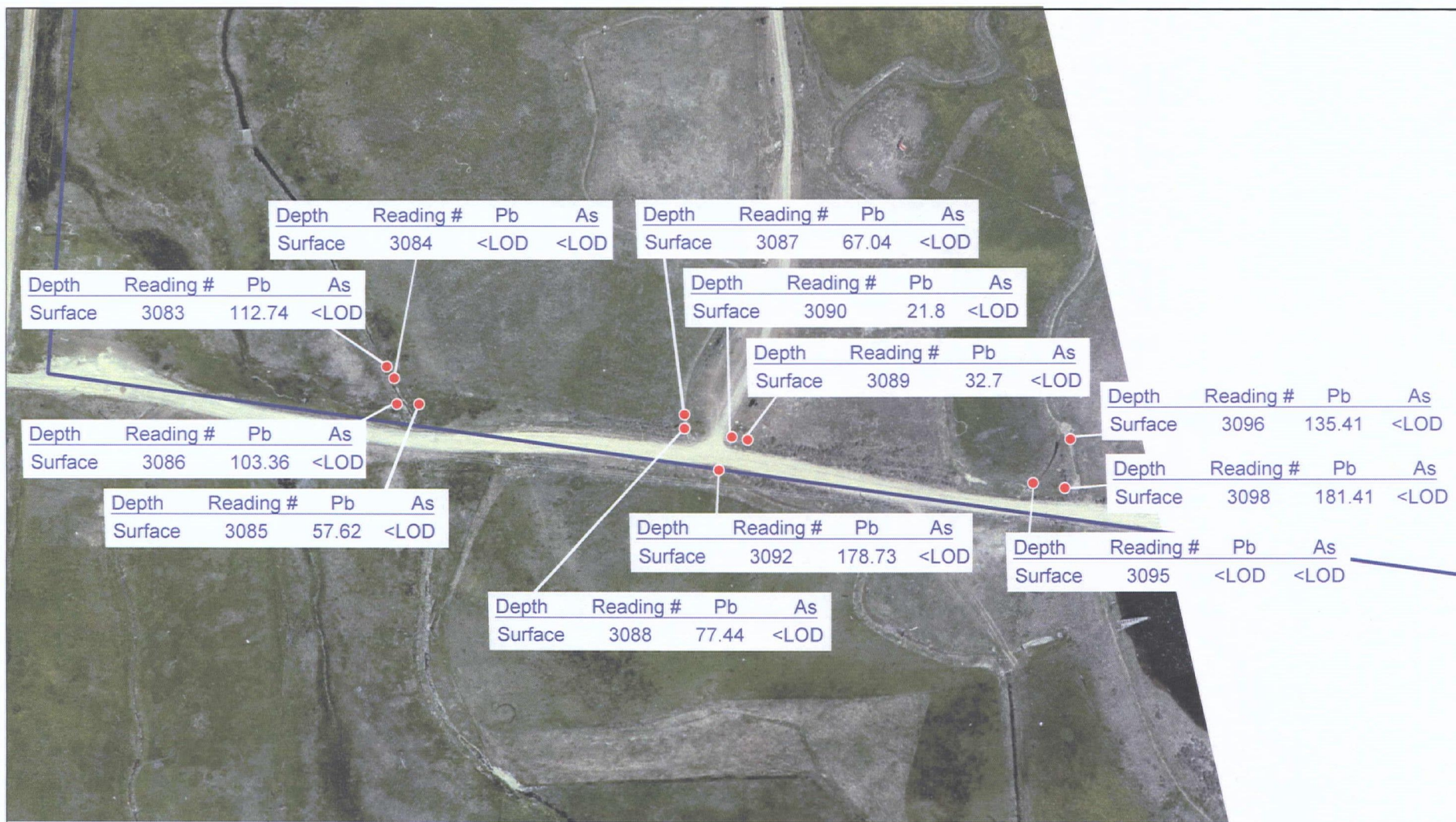


FIGURE 7

FIGURE 8



ATTACHMENT 1

SOIL SAMPLING REPORT
SILVER GATE RANCHES PROPERTY
APRIL 11, 2014



Prepared for:

WALTER PLUMB III
90 SOUTH 400 WEST #360
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APPENDICES

Appendix A:	Granite 2007 Soil Sampling Letter Reports
Appendix B:	Laboratory Analytical Reports
Appendix C:	GPS Coordinates of Sampling Locations

SOIL SAMPLING REPORT

Silver Gate Ranches

1.0 INTRODUCTION

This report presents the results of soil sampling conducted in January 2014 at the Silver Gate Ranches property (the Property) in Park City, Summit County, Utah (Figure 1). Soil samples were collected and analyzed to determine if the Property has been impacted by mining wastes.

The Property lies within Lower Silver Creek Operable Unit 2 (OU2) of the Richardson Flat National Priority List (NPL; also known as Superfund) site. The Lower Silver Creek drainage has been impacted by mining waste (tailings) and contains soil and sediment with elevated concentrations of lead and arsenic. Mining waste discharged into Silver Creek was carried downstream and resulted in widespread contamination of the Silver Creek floodplain. Elevated concentrations of lead and arsenic have also been found in irrigation ditches that originated as diversions from Silver Creek due to the deposition of entrained tailings materials.

1.1 BACKGROUND

The Silver Gate Ranches property was formerly the Pace Ranch, which was established in 1861. In the mid-1990s, Walter Plumb III entered into a partnership with brothers Michael, Robert and Kevin Pace (the owners of the Pace Ranch) with the aim of developing the property for residential use. Granite Environmental, Inc. (Granite) was retained in 2007 to investigate select portions of the Property to determine if it had been impacted by mining wastes; the results of this study are summarized below. In 2013, Mr. Plumb engaged SAGE Environmental, L.L.C. (SAGE) to review the results of soil sampling conducted by Granite and to collect and analyze additional soil samples to attempt to determine if soil on the Property contained elevated concentrations of metals due to the presence of mining wastes.

1.2 SUMMARY OF 2007 INVESTIGATION

In 2007, Granite collected 30 soil samples from various locations on the Property (Granite 2007a). Samples were collected from irrigation ditches just inside the southern property boundary and also at several locations in the southwest corner of the property (near the location of a former corral), and from along the western property boundary, which adjoins the State of Utah Rail Trail. The Silver Creek floodplain lies immediately to the west of the Rail Trail.

Soil grab samples were collected from the 0-6 inch depth interval and were analyzed by American West Analytical Laboratories of Salt Lake City, UT for total arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver using EPA Methods 6010B, 6020 and 7471A. The Granite letter report is included in Appendix A and the results are summarized in Table 1.

Analytical results were compared to the U.S. Environmental Protection Agency's (EPA's) Regional Screening Levels (RSLs) for soil under a residential exposure scenario that had been used as screening levels in a previous study conducted by the Utah Division of Environmental Response

and Remediation (*Innovative Assessment Analytical Results Report, Lower Silver Creek, Summit County, Utah* ; UDERR 2002). Lead and arsenic concentrations of two metals exceeded their RSLs: lead (400 mg/kg) and arsenic (23 mg/kg). Sample A2-SS1 (410 mg/kg) was the only sample from inside the property boundaries that exceeded the RSL for lead, and was collected from the southwest corner of the property near the former corrals. (Note that one sample (A1-SS1) was collected from outside the property, from the area between the western property fence line and the Rail Trail. This sample contained 540 mg/kg lead, which also exceeded the screening level.) Only sample B3-SS1 (31 mg/kg), which was located north of the former corral, exceeded the arsenic screening level. Sample locations are shown on the figure attached to the Granite (2007a) report in Appendix A.

Four irrigation ditches were sampled near the southern property boundary. These ditches were referred to as the “F”, “G”, “H”, and “I” ditches in the sample identification numbers (Figure 1). Three samples were collected from a transect at each location: one sample adjacent to and uphill of the ditch, one sample from the floor of the ditch, and one sample adjacent to and downhill of the ditch. Results ranged from 28 – 84 mg/kg lead and 4.5 – 9.8 mg/kg arsenic; none of the samples exceeded either the lead or arsenic RSLs.

Granite collected a second round of samples from the vicinity of samples A-2 and B-3 (Granite 2007b). The letter report describing this sampling is also included in Appendix A and the results are summarized in Table 1. These samples were collected as five point composite samples to attempt to determine the average metals concentration in each area. Samples were analyzed as above. Sample “A-2 Comp” contained lead at 380 mg/kg and sample “B-3 Comp” contained 23 mg/kg arsenic. Based on these results, Granite concluded that the average concentrations of lead in the area of sample A-2 and of arsenic in the area of sample B-3 were below the screening levels and that the property presented no risk to future residents.

2.0 2014 SOIL SAMPLING

A second phase of sampling was conducted in January 2014 to further delineate the extent of lead impacts on the Property. The sampling rationale was developed based on a combination of information concerning ranch operations and data on heavy metals concentrations in soil obtained from the 2007 sampling.

2.1 RANCH HISTORY RELATED TO POTENTIAL INTRODUCTION OF MINING WASTES

SAGE interviewed Michael, Robert and Kevin Pace on January 14, 2014 to gain information on past and present management practices of the Property. The three Pace brothers grew up on the property and currently manage ranch operations. They were asked to describe any operations or activities that could have resulted in the deposition of mining waste on the Property. According to the Pace brothers, there were three potential pathways by which mining waste from the Silver Creek floodplain could have been introduced: 1) through sediment entrained in irrigation water that was diverted from Silver Creek, 2) from spillage related to the former shipment of tailings from a loading dock located on the western Property boundary, or 3) from sediment adhering to cattle that were held in the former corral on the southwest corner of the property prior to being loaded for rail transport. These are discussed in more detail in the sections below.

2.1.1 Irrigation Ditches and Wetland/Spring Area

Four main irrigation ditches enter the south side of the Property. All four derive from one main unnamed ditch which originates as a diversion off Silver Creek near the intersection of US 40 and UT 248 (see Figure 2). Figure 3 is a 1967 aerial photo obtained from the Pace brothers (source unknown) that has been annotated to highlight the irrigation ditches upstream (south) of the Property. The ditches are labeled as the F, G, H and I ditches following the nomenclature used by Granite in the 2007 sampling. The F and G ditches are located east of the north-south road that runs through the Property (known as the “Haul Road”). The feeder for the F and G ditches was destroyed in 2007 or 2008 during the development of a property near the reservoir, and the portion of the Property east of the Haul Road that was served by the F and G ditches has not been irrigated since that time. However, irrigation flows continued into the H, I, and J ditches. According to the Pace brothers, the H and I ditches were used to irrigate the property in 2011 and 2012, but were not used during 2013.

The “J” ditch (following the Granite nomenclature) is the westernmost branch of the main ditch and flows along the top of a north-south trending ridge located to the south of the County Road and south of the western portion of the Property (Figure 3). According to the Pace brothers this ditch irrigated the parcel south of the County Road but was never used to irrigate the Property. Water from this ditch flowed down the east and west sides of the ridge. Flow down the west side of the ridge was collected and passed through a culvert underneath the rail trail south of the County Road, where it entered Silver Creek. Irrigation water that flowed down the east side of the ridge sometimes ponded in a low spot just south of the County Road (see Figure 3). This irrigation return flow drained north through a culvert under the County Road and onto the Property where it entered a wetland associated with springs emanating from the side of the hill to the east. Water from the springs and from the irrigation return flow exits the property and then flows in a ditch between the western Property fence and the Rail Trail.

The Pace brothers stated that portions of the F, G, H, and I irrigation ditches would be “cleaned out” every 10-15 years. This process historically involved dragging a scraper behind a tractor to remove sediment. More recently the sediment was excavated using a backhoe. Spoils removed from the ditches were generally placed on the downhill side of each ditch as it was cleaned (thereby creating a berm along the downhill edge). At numerous points along each ditch there are breaks in the berm which allowed water to flow out to irrigate adjacent lands via sheet flow.

2.1.2 Corral Area

Historically, the southwest corner of the property was utilized by the UPRR as a corral. The Pace brothers stated in the January 2014 interview that this area had been selected as the location for the corral because it was topographically higher than the surrounding area and was not susceptible to flooding. Cattle from the vicinity were brought to the corral prior to shipment by rail. Structures located here included four separate holding pens and a loading dock that accessed the adjacent rail line to the west (Figure 3). The Pace brothers did not know when the corral was constructed but stated that it was demolished in approximately 1973. Some of the lumber from the former structures was used to build the “Lounging Shed”, the long, rectangular barn-like structure located approximately near the middle of the western property boundary (Figure 1), and some was left lying in the vicinity of the former corral.

2.1.3 Wortley Loading Dock Area

During the January 14, 2014 interview the Pace Brothers indicated that during the late 1960s a Mr. Wortley had utilized a loading dock located on western boundary of the property near the Lounging Shed (Figure 2) for the purpose of shipping tailings that he mined from the nearby Silver Creek floodplain. Based on their recollections, the tailings were excavated from the lower Silver Creek floodplain and trucked to the wooden loading dock. Tailings were not stockpiled prior to loading but were direct loaded to railcars from the elevated dock. The tailings were reportedly shipped to the Kennecott smelter near Magna, UT where they were used as furnace flux.

2.2 CONTAMINANTS OF CONCERN

Although Granite compared the results of their 2007 soil sampling to the RSLs that had been utilized as screening levels in the 2002 UDERR study, according to Bill Rees of the UDERR Voluntary Cleanup Program (personal communication, 10/2/2013), the Lower Silver Creek Adopted Screening Levels from Richardson Flat Operable Unit 1 (OU1) are currently being used by the EPA for soils and sediment from Lower Silver Creek. The OU1 screening level for arsenic is 100 mg/kg for both sediment and soil, and for lead the screening levels are 310 mg/kg for sediment and 500 mg/kg for soil. Sediment screening levels are appropriate when samples were collected from irrigation ditches, drainages, and wetland areas or when the material is sediment that was removed from irrigation ditches.

SAGE ruled out arsenic as a contaminant of concern since none of the 32 samples collected by Granite in 2007 exceeded the 100 mg/kg screening level for arsenic. The highest arsenic concentration reported in the Granite studies was 39 mg/kg, well below the OU1 screening level. Therefore, soil samples in this study were only analyzed for lead.

2.3 SOIL SAMPLING RATIONALE

None of the samples collected from the irrigation ditches in 2007 contained elevated concentrations of lead (all were below 100 mg/kg). However, other irrigation ditches that originated as diversions from Silver Creek are known to have been contaminated from tailings materials carried by the irrigation flows (e.g., Silver Creek Village VCP Site #C075; SAGE 2013). Therefore, additional samples were collected in 2014 from the F, G, H, and I ditches to confirm the 2007 results.

Sample B3-SS1 collected in 2007 from north of the corral in the wetland/spring area contained elevated concentration of lead (350 mg/kg). Although this lead concentration was below the SSL of 400 mg/kg that was used for comparison in 2007, it exceeds the current sediment screening level of 310 mg/kg. Therefore, additional samples were collected from this location in 2014.

One 2007 soil sample (A2-SS1) collected from the former corral contained 410 mg/kg lead, which exceeded the SSL of 400 mg/kg. The corral is located on a topographic high point and there is no reason to believe that it has been impacted by irrigation water containing entrained tailings. Based on this result, additional samples were collected from within the footprint of the former corral in 2014.

To investigate the Wortley loading dock area, six soil samples were collected from three locations on and around the former loading dock area and analyzed for total lead.

3.0 METHODS

SAGE collected 46 soil samples on January 29, 2014 using the methods described below.

3.1 SOIL SAMPLES

A backhoe was used to excavate test pits. Soil grab samples were collected from the sidewalls of the test pits using decontaminated plastic trowels. Soil samples were placed in new quart Ziplock® plastic bags. Stones, pebbles and organic matter were removed and the sample was homogenized by mixing the contents of the plastic bag.

Irrigation ditches were sampled by collecting grab samples from two locations in each of the four ditches: immediately inside the southern property fence, and approximately 25 feet to the north (downstream) of the first location. Sample locations are shown on Figure 4. Three samples were collected at each location: from depths of 0-2 inches and 2-12 inches from the center of the ditch bottom and from 0-6 inches in the adjacent ditch berm (on the western or downhill side of the ditch). Ditch bottom samples were identified by sample number and depth (e.g., SGR-01 (0-2")) and berm samples were designated by the addition of a "B" (e.g., SGR-02B (0-6")).

Samples were collected from the corral, wetland, and Wortley loading dock area by collecting grab samples from the 0-2 inch and 2-12 inch depth intervals from the sidewall of the test pit after it had been excavated by the backhoe. These samples were identified by sample number and depth (e.g., SGR-17 (2-12")). Sample locations for the corral and wetland are shown on Figure 4 and the Wortley loading dock sampling locations are shown on Figure 5.

All sample locations were recorded using a Garmin Oregon 450 handheld GPS unit and were staked.

3.2 SAMPLE HANDLING AND ANALYSIS

Samples were labeled, placed in an insulated cooler and maintained under chain-of-custody until delivered to American West Analytical Laboratories (AWAL) in Salt Lake City, UT the following day. (Note that soil samples for total lead analysis do not require cooling after collection.) The laboratory prepared the soil samples using Method 3051A and analyzed for lead using EPA Method 6020A.

4.0 RESULTS

The January 2014 sampling identified several areas of the Silver Gate Ranches property that contained elevated concentrations of lead. Samples with concentrations exceeding the Richardson Flat OUI screening levels for lead were found in the bottoms of the F and G ditches, in the berm of the H ditch, in the wetland area, and at the former Wortley loading dock area.

Laboratory analytical results for the soil grab samples are summarized in Table 2, and the laboratory reports are provided in Appendix B. GPS coordinates for sampling locations are provided in Appendix C.

4.1 IRRIGATION DITCHES

Eight locations were sampled in the irrigation ditches: SGR-01 through SGR-08 (Figure 4). Lead concentrations from samples collected from F, G, H, and I ditch bottoms and berms ranged between 9.47 and 1,270 mg/kg (Table 2). The F, G and H ditches each contained one sample with lead concentrations exceeding the sediment screening level of 310 mg/kg. These results do not support the results of the 2007 study, where the highest lead concentration reported in these four ditches was only 84 mg/kg (Table 1).

With the exception location SGR-8, all surface samples collected from the 0-2 inch depth interval in the ditch samples contained higher concentrations of lead than the samples from the underlying 2-12 inch depth interval. For location SGR-8, the concentrations in samples from the 0-2 inch (25.9 mg/kg) and 2-12 inch (48.4 mg/kg) depths were similar and well below the regulatory standard.

The berm sample collected from the H ditch (SGR-06B (0-6")) at 448 mg/kg) was the only berm sample to exceed the OU1 sediment screening level for lead.

4.2 WETLAND/SPRING AREA

Samples were collected from three locations in the wetlands area: SGR-09 through SGR-11 (Figure 4). SGR-09 was located near the outflow of the culvert underneath the County Road that carried irrigation return water from the J ditch, and the other two samples were located in the wetland between SGR-09 and the western fence line. Only one sample in the wetland/spring area had a lead concentration exceeding the sediment screening level of 310 mg/kg: SGR-10 (0-2") at 633 mg/kg lead; the 2-12 inch sample from the same location contained only 42.2 mg/kg lead. The 0-2 inch depth interval in the other two wetland samples also contained higher lead concentrations than the underlying layer (Table 1). Sample B3-SS1 collected in the 2007 study from this area contained 350 mg/kg lead, consistent with the current findings. The elevated lead concentrations in this area may be related to irrigation return flows originating from the J ditch (see Section 2.1.1).

4.3 CORRAL AREA

Samples were collected from five locations in the corral (Figure 4). One location was sampled in each of the four quadrats that made up the original corral (SGR-12 through SGR-15), and a fifth sample (SGR-15) was collected from immediately inside the corral gate on the southern fence line. Corral samples ranged from 25.6 – 447 mg/kg lead (Table 1). In all cases, the surface sample collected from the 0-2 inch depth interval contained higher concentrations of lead than the sample from the 2-12 inch depth interval at the same location. These results corroborate the 2007 results, which found 410 ppm in sample A2-SS1, also located in the former corral area. All of the lead concentrations in samples selected in the corral were below the OU1 soil screening level of 500 mg/kg.

4.4 WORTLEY LOADING DOCK AREA

Three locations were sampled in the vicinity of the former Wortley loading dock. The only structure remaining from the loading dock was an earthen berm aligned perpendicular to the rail with occasional wood debris on the ground. Sample SGR-16 was located on the top of the earthen berm that likely formed the support for the wooden dock, and samples SGR-17 and SGR-19 were collected approximately 20 feet north and south, respectively, off the center of the loading dock at ground elevation. Sample locations are shown on Figure 5.

Lead concentrations in the loading dock area ranged between 79.2 and 1,870 mg/kg (Table 1). While lead concentrations of both the samples collected in the center location (SGR-18) were below the OU1 soil screening level of 500 mg/kg and generally low, the samples collected north and south of this location (SGR-17 and SGR-19, respectively) both exceeded the screening level. The SGR-18 location may have been beneath the wooden loading dock structure which may have shielded the ground from spilled tailings. The locations to the north and south of the loading dock berm may have been impacted by spillage from the truck as it backed up the wooden ramp to load the railcars.

In samples SGR-17 and SGR-19, the surface sample collected from the 0-2 inch depth interval contained lower concentrations of lead than the sample from the 2-12 inch depth interval at the same location. Conversely, the surface sample collected from the 0-2 inch depth interval in sample SGR-18 contained higher concentrations of lead than the sample from the 2-12 inch depth interval.

5.0 DISCUSSION AND RECOMMENDATIONS

This investigation has identified elevated lead concentrations that appear to be associated with two separate sources: irrigation water originating from Silver Creek that contained contaminated sediment and the direct handling of tailings excavated from the Silver Creek floodplain.

Several samples collected from irrigation ditches and the wetland area along the Property's southern boundary exceeded the OU1 sediment screening level of 310 mg/kg lead. The elevated lead concentrations in these irrigation pathways suggests that contamination was likely transported onto the site as sediment entrained in irrigation water originating from Silver Creek. Additional sampling would be required to determine the horizontal and vertical extent of the impacted areas, including the ditches, ditch berms, and the areas below the ditches that were irrigated by sheet flow.

Four of the six soil samples collected at the location of the former Wortley loading dock exceeded the OU1 soil screening level of 500 mg/kg lead. These samples were collected on either side of an elevated mound of soil where the loading dock had been located. The lead concentrations detected at the Wortley loading dock area were the highest found in the January 2014 investigation. Further investigation of this area would be required to delineate the full lateral extent and total depth of lead impacted soils.

6.0 REFERENCES

- Granite. 2007a. *Pace Ranch Soil Sampling for RCRA Metals, Granite Project No. 0356-022*. Letter from Jack Elder to Walter Plumb III. Granite Environmental, Inc. May 24, 2007.
- Granite. 2007b. *Results of Composite Sampling, Pace Ranch, Summit County, Utah, Granite Project No. 0356-022*. Letter from Jack Elder to Walter Plumb III. Granite Environmental, Inc. May 30, 2007.
- SAGE. 2013. *Soil Sampling Report, Parcel A-2, Silver Creek Village VCP Site #075*. SAGE Environmental, L.L.C. March 12, 2013.
- UDERR. 2002. *Innovative Assessment Analytical Results Report, Lower Silver Creek, Summit County, Utah*. Utah Division of Environmental Response and Remediation. 2002.

Tables

Table 1. Lead and Arsenic Concentrations in Soil, 2007 Study

Sample ID	Depth Interval (inches)	Date	Location	Lead (mg/kg)	Arsenic (mg/kg)
A1-SS1 ¹	0-6	5/14/2007	W of corral; off Property	540	39
A2-SS1	0-6	5/14/2007	SW corner of Property (corral)	410	14
A-2 Comp ³	?	5/23/2007	Corral area	380 ²	17
A3-SS1	0-6	5/14/2007	Corral area	110	7.4
B1-SS1	0-6	5/14/2007	Spring area N of corral	220	13
B2-SS1	0-6	5/14/2007	Spring area N of corral	55	8.1
B3-SS1	0-6	5/14/2007	Spring area N of corral	350	31
B-3 Comp ³	?	5/23/2007	Spring area N of corral	200	23
C1-SS1	0-6	5/14/2007	near W Property boundary	200	14
C2-SS1	0-6	5/14/2007	near W Property boundary	81	9.3
C3-SS1	0-6	5/14/2007	near W Property boundary	20	11
D1-SS1	0-6	5/14/2007	SW of Lounging Shed	300	30
D2-SS1	0-6	5/14/2007	SW of Lounging Shed	65	6.0
D3-SS1	0-6	5/14/2007	SW of Lounging Shed	48	6.6
E1-SS1	0-6	5/14/2007	NW of Lounging Shed	22	5.2
E2-SS1	0-6	5/14/2007	NW of Lounging Shed	12	2.9
E3-SS1	0-6	5/14/2007	N of Lounging Shed	27	6.7
E4-SS1	0-6	5/14/2007	N of Lounging Shed	45	9.6
E5-SS1	0-6	5/14/2007	N of Lounging Shed	38	8.5
E6-SS1	0-6	5/14/2007	E of Lounging Shed	15	5.7
F1-SS1	0-6	5/14/2007	below ditch	74	8.1
F2-SS1	0-6	5/14/2007	in ditch	30	9.8
F3-SS1	0-6	5/14/2007	above ditch	26	7.9
G1-SS1	0-6	5/14/2007	below ditch	30	6.7
G2-SS1	0-6	5/14/2007	in ditch	51	8.4
G3-SS1	0-6	5/14/2007	above ditch	48	5.6
H1-SS1	0-6	5/14/2007	below ditch	83	7.3
H2-SS1	0-6	5/14/2007	in ditch	61	5.4
H3-SS1	0-6	5/14/2007	above ditch	32	5.2
I1-SS1	0-6	5/14/2007	below ditch	84	6.7
I2-SS1	0-6	5/14/2007	in ditch	28	4.5
I3-SS1	0-6	5/14/2007	above ditch	39	5.4

Notes:

410 = Exceeds SSL for lead (400 mg/kg).

39 = Exceeds SSL for arsenic (23 mg/kg).

¹ = Between rail trail and fence - off Property

² = Analyte concentration is too high for accurate spike and/or RPD recovery

³ = Composite sample

WALTER PLUMB III

SOIL SAMPLING REPORT

SILVER GATE RANCHES PROPERTY - APRIL 2014

TABLE 1
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Table 2. Lead Concentrations in Soil, 2014 Study

Sample ID	Depth Interval (inches)	Date Collected	Location ¹	Lead (mg/kg)
SGR-01 (0"-2")	0-2	1/29/2014	F Ditch	273 ²
SGR-01 (2"-12")	2-12	1/29/2014	F Ditch	80.5
SGR-01B (0"-6")	0-6	1/29/2014	F Ditch Berm	9.47
SGR-02 (0"-2")	0-2	1/29/2014	F Ditch	355
SGR-02 (2"-12")	2-12	1/29/2014	F Ditch	64.1
SGR-02B (0"-6")	0-6	1/29/2014	F Ditch Berm	13.4
SGR-03 (0"-2")	0-2	1/29/2014	G Ditch	1,270
SGR-03 (2"-12")	2-12	1/29/2014	G Ditch	13.6
SGR-03B (0"-6")	0-6	1/29/2014	G Ditch Berm	54.6
SGR-04 (0"-2")	0-2	1/29/2014	G Ditch	250
SGR-04 (2"-12")	2-12	1/29/2014	G Ditch	116 ³
SGR-04B (0"-6")	0-6	1/29/2014	G Ditch Berm	46.4
SGR-05 (0"-2")	0-2	1/29/2014	H Ditch	183
SGR-05 (2"-12")	2-12	1/29/2014	H Ditch	134
SGR-05B (0"-6")	0-6	1/29/2014	H Ditch Berm	195
SGR-06 (0"-2")	0-2	1/29/2014	H Ditch	238
SGR-06 (2"-12")	2-12	1/29/2014	H Ditch	150
SGR-06B (0"-6")	0-6	1/29/2014	H Ditch Berm	448
SGR-07 (0"-2")	0-2	1/29/2014	I Ditch	121
SGR-07 (2"-12")	2-12	1/29/2014	I Ditch	49.3
SGR-07B (0"-6")	0-6	1/29/2014	I Ditch Berm	60.6
SGR-08 (0"-2")	0-2	1/29/2014	I Ditch	25.9
SGR-08 (2"-12")	2-12	1/29/2014	I Ditch	48.4
SGR-08B (0"-6")	0-6	1/29/2014	I Ditch Berm	46.6
SGR-09 (0"-2")	0-2	1/29/2014	Wetland/Spring	123
SGR-09 (2"-12")	2-12	1/29/2014	Wetland/Spring	14.2
SGR-10 (0"-2")	0-2	1/29/2014	Wetland/Spring	633
SGR-10 (2"-12")	2-12	1/29/2014	Wetland/Spring	42.2
SGR-11 (0"-2")	0-2	1/29/2014	Wetland/Spring	224
SGR-11 (2"-12")	2-12	1/29/2014	Wetland/Spring	122
SGR-12 (0"-2")	0-2	1/29/2014	Corral NE	131
SGR-12 (2"-12")	2-12	1/29/2014	Corral NE	67.7 ³
SGR-13 (0"-2")	0-2	1/29/2014	Corral NW	50.8
SGR-13 (2"-12")	2-12	1/29/2014	Corral NW	36.8
SGR-14 (0"-2")	0-2	1/29/2014	Corral SE	94
SGR-14 (2"-12")	2-12	1/29/2014	Corral SE	79.2
SGR-15 (0"-2")	0-2	1/29/2014	Corral SW	42.3
SGR-15 (2"-12")	2-12	1/29/2014	Corral SW	25.6
SGR-16 (0"-2")	0-2	1/29/2014	Corral Gate	447
SGR-16 (2"-12")	2-12	1/29/2014	Corral Gate	58
SGR-17 (0"-2")	0-2	1/29/2014	Wortley Dock N	885
SGR-17 (2"-12")	2-12	1/29/2014	Wortley Dock N	1,870
SGR-18 (0"-2")	0-2	1/29/2014	Wortley Dock Middle	215
SGR-18 (2"-12")	2-12	1/29/2014	Wortley Dock Middle	79.2
SGR-19 (0"-2")	0-2	1/29/2014	Wortley Dock S	526
SGR-19 (2"-12")	2-12	1/29/2014	Wortley Dock S	1,490

Notes:

¹ = Lower Silver Creek Adopted Screening Level for sediment (310 mg/kg) applies to irrigation ditches/berms, and Lower Silver Creek Adopted Screening Level for soil (500 mg/kg) applies to all other upland areas.

² = Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

³ = Matrix Spike recoveries and/or RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

355 = Irrigation ditch location exceeding Lower Silver Creek Adopted Screening Level for lead in sediment (310 mg/kg).

885 = Upland location exceeding Lower Silver Creek Adopted Screening Level for soil (500 mg/kg).

WALTER PLUMB III

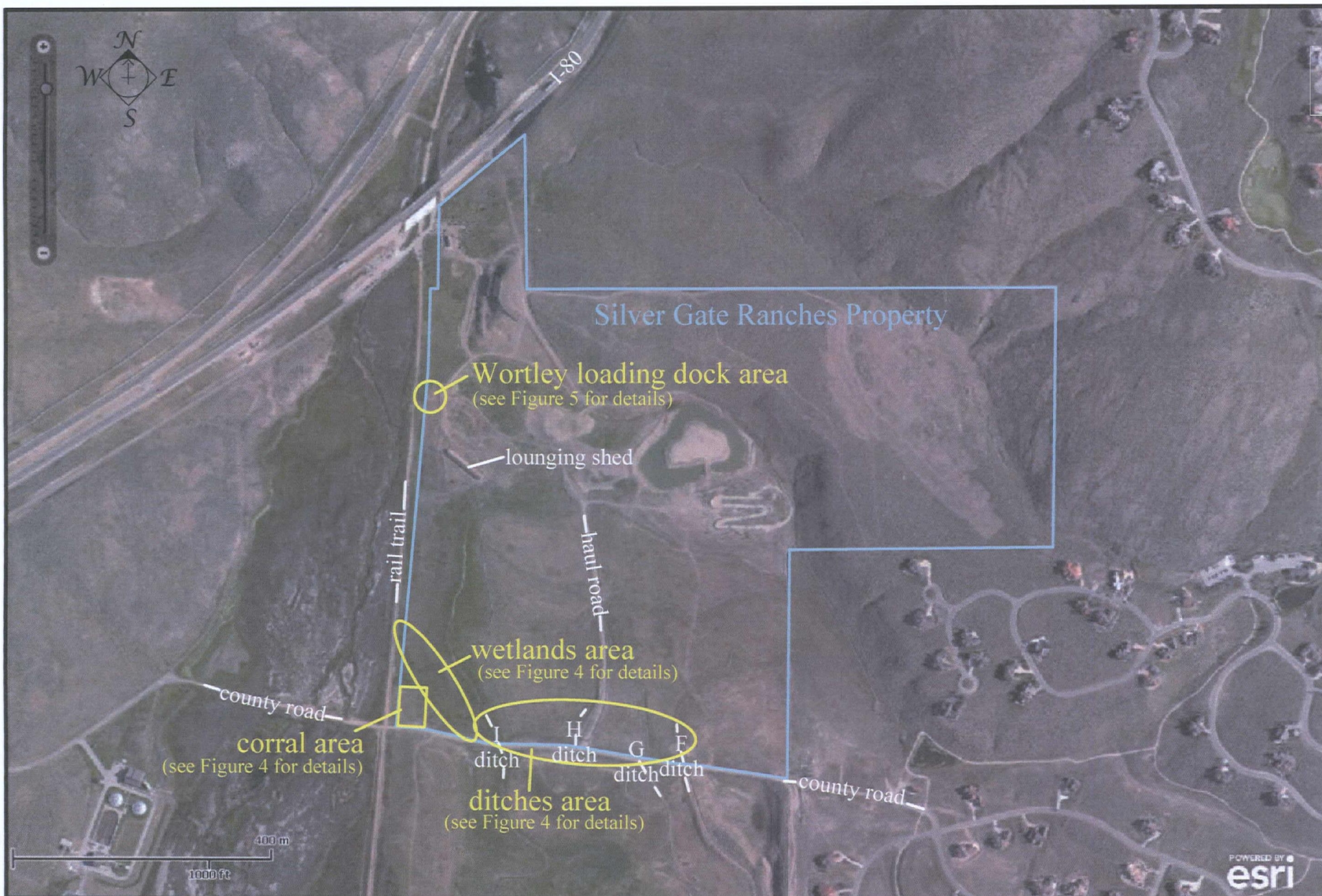
SOIL SAMPLING REPORT

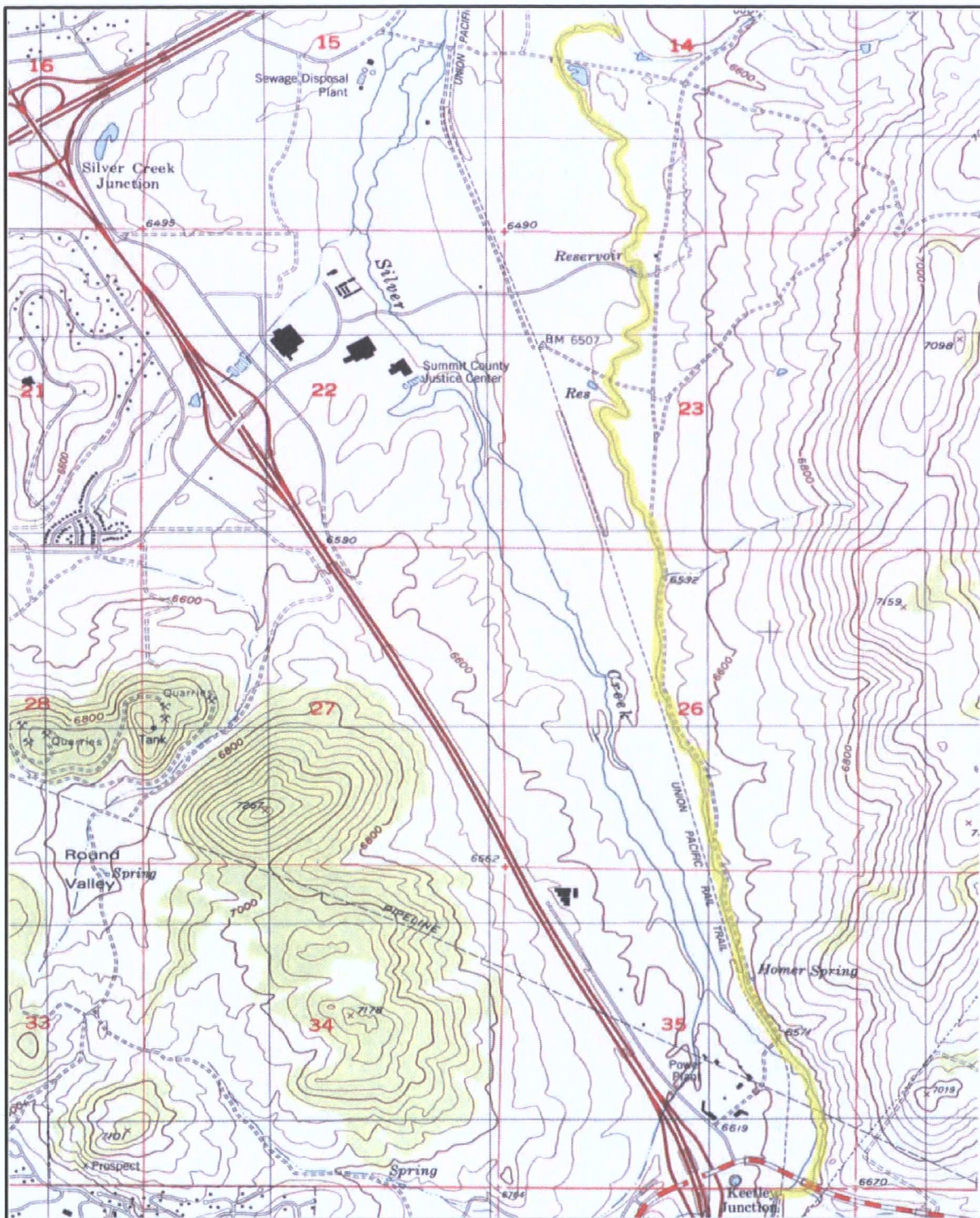
SILVER GATE RANCHES PROPERTY - APRIL 2014

TABLE 2

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Figures





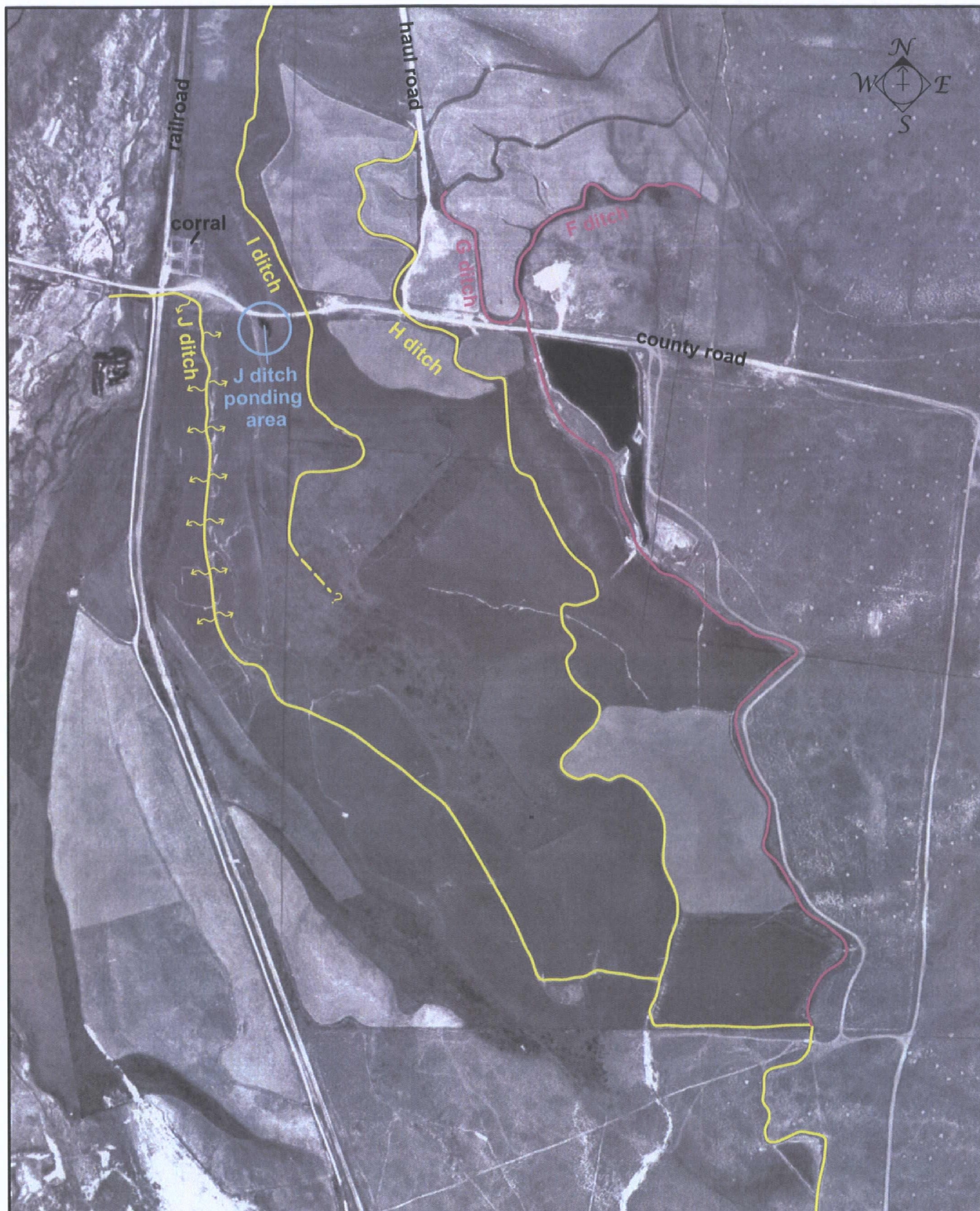
1999 Park City East Topo Map

 Irrigation Ditch

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 2
Irrigation Ditch Origin





Legend:

- irrigation ditch
- historic ditch (no longer in use)

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 3
1967 Aerial Photo
showing irrigation ditches





Legend:

○ 2014 Sample Areas

★ SGR10 Sample Location

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 4
Soil Sample Locations
South Sampling Areas





Legend:

○ 2014 Sample Areas

SGR10
★ Sample Location

Walter Plumb III
Silver Gate Ranches
Soil Sampling Report
April 2014

Figure 5
Soil Sample Locations
North Sampling Areas



Appendix A
Granite 2007 Soil Sampling Letter Reports



May 24, 2007

Walter Plumb III
90 South 400 West #360
Salt Lake City, Utah 84101

Subject: Pace Ranch
Soil Sampling for RCRA Metals
Granite Project No. 0356-022

Dear Mr. Plumb:

At your request, Granite Environmental, Inc. collected 30 soil samples from the above-referenced property, in order to ascertain whether metals levels in the soils may be present at potentially harmful levels. We analyzed the samples for the eight RCRA metals. Mercury was not analyzed, as it is not part of the RCRA metals suite; however, if metals enrichment (including mercury) has occurred, it should be evident by an increase in the RCRA metals.

Granite reviewed a document prepared by Utah Division of Environmental Response and Remediation (undated but presumably 2002 or 2003) entitled "Innovative Assessment Analytical Results Report, Lower Silver Creek, Summit County, Utah," which analyzed soils, sediment and water for smelting/mining wastes from Silver Creek in the vicinity of the Pace Ranch. Granite attempted to duplicate the sample collection protocol used by DERR, so as to ensure that the data collected by us would be comparable to that of DERR. To wit, all samples were collected at 6 inches below the ground surface, the same as for the DERR study.

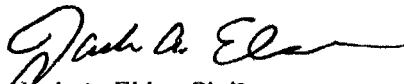
Sample locations were designated by letters of the alphabet (A to I). Samples A to E were taken along the west boundary of the property, from the lowest to highest elevations. Samples F to I assessed irrigation ditches entering the property, with their source being Silver Creek (see attached figure). Samples were usually collected in groupings of three (1 being at the lowest elevation and 3 being the highest). For example, I-1 was taken below an irrigation ditch crossing the property; I-2 in the ditch, and I-3 above the ditch. In this way, we hoped to determine if metals-contaminated water was carried in the ditch; if so, to what degree it has impacted the pasture irrigated by the ditch; and what the background levels of metals were at that location (upgradient sample).

DERR used, as a hazard standard, 400 ppm lead, the same level as the proposed EPA Region 9 residential threshold, and 23 ppm arsenic, which is well above the proposed EPA Region 9 threshold, but is in line with naturally occurring levels in Utah. The lead standard was exceeded only in sample A-2, which measured 410 ppm. This was collected in the southwest property corner near the old stockyards, where soils may have been imported. Otherwise, the highest lead concentration was 350 ppm (B-3). (Actually, sample A-1 reported lead at 540 ppm, but this sample was collected between the western boundary fence and the Rail Trail.) Arsenic was exceeded at B-3 (31 ppm), which is also in the stockyards area, and had somewhat elevated lead. Otherwise, all samples tested below thresholds. Granite intends to resample the area of A-2 and B-3 to see if the results were anomalous or indicative of the stockyards area.

It is Granite's general conclusion that the Pace Ranch has not been subject to metals enrichment of the soils, and that there is no risk to humans who may, in the future, reside there.

Sincerely,

Granite Environmental, Inc.


Jack A. Elder, Ph.D.
President





**AMERICAN
WEST
ANALYTICAL
LABORATORIES**

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Peggy McNicol
QA Officer

May 21, 2007

Jack Elder
Granite Environmental
6084 South 900 East, Suite 102
Salt Lake City, UT 84121

TEL: (801) 943-1222

FAX: (801) 943-1288

RE: Pace Ranch / 0356-022

Lab Set ID: L77825

Dear Jack Elder:

American West Analytical Labs received 30 samples on 5/14/2007 for the analyses presented in the following report.

All analyses were performed in accordance to National Environmental Laboratory Accreditation Program (NELAP) protocols unless noted otherwise. If you have any questions or concerns regarding this report please feel free to call.

Thank you.

Approved by: 
Laboratory Director or designee

Report Date: 5/21/2007 Page 1 of 35



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
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LABORATORIES

Lab Sample ID: L77825-01A
Field Sample ID: A1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 3:18:52 PM	6020	0.56	39 ¹ @
Barium	mg/kg-dry	5/17/2007 3:18:52 PM	6020	2.2	74* ²
Cadmium	mg/kg-dry	5/17/2007 3:18:52 PM	6020	0.45	7.2
Chromium	mg/kg-dry	5/18/2007 2:33:34 PM	6010B	1.1	4.4
Lead	mg/kg-dry	5/18/2007 2:33:34 PM	6010B	5.6	540 ²
Mercury	mg/kg-dry	5/17/2007 11:21:00 AM	7471A	0.044	0.25 ¹
Selenium	mg/kg-dry	5/17/2007 3:18:52 PM	6020	0.56	3.3
Silver	mg/kg-dry	5/17/2007 3:18:52 PM	6020	0.56	4.8

¹ Spike recovery indicates matrix interference. The method is in control as indicated by the laboratory control sample (LCS).

@ High RPD due to suspected matrix interference.

* The reporting limits were raised due to sample matrix interference.

² Analyte concentration is too high for accurate spike and/or RPD recovery.

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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-02A
Field Sample ID: A2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 3:45:46 PM	6020	0.57	14
Barium	mg/kg-dry	5/17/2007 3:45:46 PM	6020	2.3	190 *
Cadmium	mg/kg-dry	5/17/2007 3:45:46 PM	6020	0.45	3.2
Chromium	mg/kg-dry	5/18/2007 2:49:20 PM	6010B	1.1	10
Lead	mg/kg-dry	5/18/2007 2:49:20 PM	6010B	5.6	410
Mercury	mg/kg-dry	5/17/2007 12:24:00 PM	7471A	0.23	0.98
Selenium	mg/kg-dry	5/17/2007 3:45:46 PM	6020	0.57	6.5
Silver	mg/kg-dry	5/17/2007 3:45:46 PM	6020	0.57	2.0

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-03A
Field Sample ID: A3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results	
Arsenic	mg/kg-dry	5/17/2007 3:51:09 PM	6020	0.54	7.4	
Barium	mg/kg-dry	5/17/2007 3:51:09 PM	6020	2.2	180	*
Cadmium	mg/kg-dry	5/17/2007 3:51:09 PM	6020	0.44	1.2	
Chromium	mg/kg-dry	5/18/2007 2:53:17 PM	6010B	1.1	9.0	
Lead	mg/kg-dry	5/18/2007 2:53:17 PM	6010B	5.4	110	
Mercury	mg/kg-dry	5/17/2007 11:33:00 AM	7471A	0.044	0.15	
Selenium	mg/kg-dry	5/17/2007 3:51:09 PM	6020	0.54	7.0	
Silver	mg/kg-dry	5/17/2007 3:51:09 PM	6020	0.54	0.59	

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-04A
Field Sample ID: B1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 3:56:33 PM	6020	0.71	13
Barium	mg/kg-dry	5/17/2007 3:56:33 PM	6020	2.8	200 *
Cadmium	mg/kg-dry	5/17/2007 3:56:33 PM	6020	0.57	1.3
Chromium	mg/kg-dry	5/18/2007 2:57:16 PM	6010B	1.4	9.8
Lead	mg/kg-dry	5/18/2007 2:57:16 PM	6010B	7.1	220
Mercury	mg/kg-dry	5/17/2007 11:36:00 AM	7471A	0.057	0.35
Selenium	mg/kg-dry	5/17/2007 3:56:33 PM	6020	0.71	7.4
Silver	mg/kg-dry	5/17/2007 3:56:33 PM	6020	0.71	1.5

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
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LABORATORIES

Lab Sample ID: L77825-05A
Field Sample ID: B2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:19:21 PM	6020	0.71	8.1
Barium	mg/kg-dry	5/17/2007 4:19:21 PM	6020	2.8	280 *
Cadmium	mg/kg-dry	5/17/2007 4:19:21 PM	6020	0.57	0.74
Chromium	mg/kg-dry	5/18/2007 3:09:11 PM	6010B	1.4	11
Lead	mg/kg-dry	5/18/2007 3:09:11 PM	6010B	7.1	55
Mercury	mg/kg-dry	5/17/2007 12:26:00 PM	7471A	0.28	1.0
Selenium	mg/kg-dry	5/17/2007 4:19:21 PM	6020	0.71	7.1
Silver	mg/kg-dry	5/17/2007 4:19:21 PM	6020	0.71	< 0.71

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
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ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-06A
Field Sample ID: B3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results	
Arsenic	mg/kg-dry	5/17/2007 4:24:46 PM	6020	0.96	31	
Barium	mg/kg-dry	5/17/2007 4:24:46 PM	6020	3.8	440	*
Cadmium	mg/kg-dry	5/17/2007 4:24:46 PM	6020	0.77	2.9	
Chromium	mg/kg-dry	5/18/2007 3:13:08 PM	6010B	1.9	14	
Lead	mg/kg-dry	5/18/2007 3:13:08 PM	6010B	9.5	350	
Mercury	mg/kg-dry	5/17/2007 11:46:00 AM	7471A	0.078	0.47	
Selenium	mg/kg-dry	5/17/2007 4:24:46 PM	6020	0.96	8.1	
Silver	mg/kg-dry	5/17/2007 4:24:46 PM	6020	0.96	2.6	

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
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ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-07A
Field Sample ID: C1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:30:10 PM	6020	1.2	14
Barium	mg/kg-dry	5/17/2007 4:30:10 PM	6020	4.8	310 *
Cadmium	mg/kg-dry	5/17/2007 4:30:10 PM	6020	0.97	5.2
Chromium	mg/kg-dry	5/18/2007 3:17:13 PM	6010B	2.4	5.8
Lead	mg/kg-dry	5/18/2007 3:17:13 PM	6010B	12	200
Mercury	mg/kg-dry	5/17/2007 11:48:00 AM	7471A	0.095	0.31
Selenium	mg/kg-dry	5/17/2007 4:30:10 PM	6020	1.2	7.0
Silver	mg/kg-dry	5/17/2007 4:30:10 PM	6020	1.2	1.7

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-08A
Field Sample ID: C2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:35:33 PM	6020	0.59	9.3
Barium	mg/kg-dry	5/17/2007 4:35:33 PM	6020	2.4	240 *
Cadmium	mg/kg-dry	5/17/2007 4:35:33 PM	6020	0.47	1.2
Chromium	mg/kg-dry	5/18/2007 3:21:09 PM	6010B	1.2	9.8
Lead	mg/kg-dry	5/18/2007 3:21:09 PM	6010B	5.8	81
Mercury	mg/kg-dry	5/17/2007 11:51:00 AM	7471A	0.048	0.22
Selenium	mg/kg-dry	5/17/2007 4:35:33 PM	6020	0.59	7.1
Silver	mg/kg-dry	5/17/2007 4:35:33 PM	6020	0.59	0.66

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-09A
Field Sample ID: C3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:40:56 PM	6020	0.57	11
Barium	mg/kg-dry	5/17/2007 4:40:56 PM	6020	2.3	230 *
Cadmium	mg/kg-dry	5/17/2007 4:40:56 PM	6020	0.46	0.49
Chromium	mg/kg-dry	5/18/2007 3:25:07 PM	6010B	1.1	8.6
Lead	mg/kg-dry	5/18/2007 3:25:07 PM	6010B	5.7	20
Mercury	mg/kg-dry	5/17/2007 11:53:00 AM	7471A	0.045	< 0.045
Selenium	mg/kg-dry	5/17/2007 4:40:56 PM	6020	0.57	5.9
Silver	mg/kg-dry	5/17/2007 4:40:56 PM	6020	0.57	< 0.57

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-10A
Field Sample ID: D1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:46:20 PM	6020	1.5	30
Barium	mg/kg-dry	5/17/2007 4:46:20 PM	6020	5.9	290 *
Cadmium	mg/kg-dry	5/17/2007 4:46:20 PM	6020	1.2	2.7
Chromium	mg/kg-dry	5/18/2007 3:29:08 PM	6010B	2.9	6.9
Lead	mg/kg-dry	5/18/2007 3:29:08 PM	6010B	15	300
Mercury	mg/kg-dry	5/17/2007 11:56:00 AM	7471A	0.12	0.53
Selenium	mg/kg-dry	5/17/2007 4:46:20 PM	6020	1.5	7.1
Silver	mg/kg-dry	5/17/2007 4:46:20 PM	6020	1.5	2.2

* The reporting limits were raised due to sample matrix interference.

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Peggy McNicol
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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-11A
Field Sample ID: D2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 4:51:43 PM	6020	0.60	6.0
Barium	mg/kg-dry	5/17/2007 4:51:43 PM	6020	2.4	240 *
Cadmium	mg/kg-dry	5/17/2007 4:51:43 PM	6020	0.48	1.0
Chromium	mg/kg-dry	5/18/2007 3:33:01 PM	6010B	1.2	8.5
Lead	mg/kg-dry	5/18/2007 3:33:01 PM	6010B	6.0	65
Mercury	mg/kg-dry	5/17/2007 11:58:00 AM	7471A	0.049	0.060
Selenium	mg/kg-dry	5/17/2007 4:51:43 PM	6020	0.60	5.4
Silver	mg/kg-dry	5/17/2007 4:51:43 PM	6020	0.60	< 0.60

* The reporting limits were raised due to sample matrix interference.

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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-12A
Field Sample ID: D3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
463 West 3600 South Salt Lake City, Utah 84115	Arsenic	5/17/2007 4:57:06 PM	6020	0.73	6.6
	Barium	5/17/2007 4:57:06 PM	6020	2.9	190 *
	Cadmium	5/17/2007 4:57:06 PM	6020	0.58	0.85
	Chromium	5/18/2007 3:36:55 PM	6010B	1.4	9.4
	Lead	5/18/2007 3:36:55 PM	6010B	7.2	48
	Mercury	5/17/2007 12:01:00 PM	7471A	0.058	0.088
	Selenium	5/17/2007 4:57:06 PM	6020	0.73	5.8
	Silver	5/17/2007 4:57:06 PM	6020	0.73	< 0.73

* The reporting limits were raised due to sample matrix interference.

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Kyle F. Gross
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Peggy McNicol
QA Officer



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-13A
Field Sample ID: E1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 5:02:29 PM	6020	0.63	5.2
Barium	mg/kg-dry	5/17/2007 5:02:29 PM	6020	2.5	210 *
Cadmium	mg/kg-dry	5/17/2007 5:02:29 PM	6020	0.50	< 0.50
Chromium	mg/kg-dry	5/18/2007 3:40:51 PM	6010B	1.3	11
Lead	mg/kg-dry	5/18/2007 3:40:51 PM	6010B	6.3	22
Mercury	mg/kg-dry	5/17/2007 12:04:00 PM	7471A	0.051	< 0.051
Selenium	mg/kg-dry	5/17/2007 5:02:29 PM	6020	0.63	7.8
Silver	mg/kg-dry	5/17/2007 5:02:29 PM	6020	0.63	< 0.63

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-14A
Field Sample ID: E2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 5:07:52 PM	6020	0.57	2.9
Barium	mg/kg-dry	5/17/2007 5:07:52 PM	6020	2.3	110 *
Cadmium	mg/kg-dry	5/17/2007 5:07:52 PM	6020	0.45	< 0.45
Chromium	mg/kg-dry	5/18/2007 3:44:49 PM	6010B	1.1	7.2
Lead	mg/kg-dry	5/18/2007 3:44:49 PM	6010B	5.6	12
Mercury	mg/kg-dry	5/17/2007 12:06:00 PM	7471A	0.045	< 0.045
Selenium	mg/kg-dry	5/17/2007 5:07:52 PM	6020	0.57	9.5
Silver	mg/kg-dry	5/17/2007 5:07:52 PM	6020	0.57	< 0.57

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
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LABORATORIES

Lab Sample ID: L77825-15A
Field Sample ID: E3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results	
463 West 3600 South Salt Lake City, Utah 84115	Arsenic	mg/kg-dry	5/17/2007 5:24:02 PM	6020	0.61	6.7
	Barium	mg/kg-dry	5/17/2007 5:24:02 PM	6020	2.4	260 *
	Cadmium	mg/kg-dry	5/17/2007 5:24:02 PM	6020	0.49	0.57
	Chromium	mg/kg-dry	5/18/2007 3:56:39 PM	6010B	1.2	9.1
	Lead	mg/kg-dry	5/18/2007 3:56:39 PM	6010B	6.1	27
	Mercury	mg/kg-dry	5/17/2007 12:14:00 PM	7471A	0.049	0.077
	Selenium	mg/kg-dry	5/17/2007 5:24:02 PM	6020	0.61	8.2
	Silver	mg/kg-dry	5/17/2007 5:24:02 PM	6020	0.61	< 0.61

* The reporting limits were raised due to sample matrix interference.

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Peggy McNicol
QA Officer



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-16A
Field Sample ID: E4-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 5:45:38 PM	6020	1.3	9.6
Barium	mg/kg-dry	5/17/2007 5:45:38 PM	6020	5.2	310 * 2
Cadmium	mg/kg-dry	5/17/2007 5:45:38 PM	6020	1.0	1.0
Chromium	mg/kg-dry	5/18/2007 4:12:21 PM	6010B	2.6	14
Lead	mg/kg-dry	5/18/2007 4:12:21 PM	6010B	13	45
Mercury	mg/kg-dry	5/17/2007 1:52:17 PM	7471A	0.10	0.17
Selenium	mg/kg-dry	5/17/2007 5:45:38 PM	6020	1.3	12
Silver	mg/kg-dry	5/17/2007 5:45:38 PM	6020	1.3	< 1.3

* The reporting limits were raised due to sample matrix interference.

2 Analyte concentration is too high for accurate spike and/or RPD recovery.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-17A
Field Sample ID: E5-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 6:12:36 PM	6020	0.63	8.5
Barium	mg/kg-dry	5/17/2007 6:12:36 PM	6020	2.5	250 *
Cadmium	mg/kg-dry	5/17/2007 6:12:36 PM	6020	0.50	0.55
Chromium	mg/kg-dry	5/18/2007 4:28:21 PM	6010B	1.3	9.7
Lead	mg/kg-dry	5/18/2007 4:28:21 PM	6010B	6.3	38
Mercury	mg/kg-dry	5/17/2007 3:08:02 PM	7471A	0.051	< 0.051
Selenium	mg/kg-dry	5/17/2007 6:12:36 PM	6020	0.63	8.6
Silver	mg/kg-dry	5/17/2007 6:12:36 PM	6020	0.63	< 0.63

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-18A
Field Sample ID: E6-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
Arsenic	mg/kg-dry	5/17/2007 6:28:45 PM	6020	0.61	5.7
Barium	mg/kg-dry	5/17/2007 6:28:45 PM	6020	2.5	180 *
Cadmium	mg/kg-dry	5/17/2007 6:28:45 PM	6020	0.49	< 0.49
Chromium	mg/kg-dry	5/18/2007 4:32:22 PM	6010B	1.2	8.0
Lead	mg/kg-dry	5/18/2007 4:32:22 PM	6010B	6.1	15
Mercury	mg/kg-dry	5/17/2007 2:07:35 PM	7471A	0.048	< 0.048
Selenium	mg/kg-dry	5/17/2007 6:28:45 PM	6020	0.61	5.1
Silver	mg/kg-dry	5/17/2007 6:28:45 PM	6020	0.61	< 0.61

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-19A
Field Sample ID: F1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results	
Arsenic	mg/kg-dry	5/17/2007 6:34:09 PM	6020	0.55	8.1	
Barium	mg/kg-dry	5/17/2007 6:34:09 PM	6020	2.2	180	*
Cadmium	mg/kg-dry	5/17/2007 6:34:09 PM	6020	0.44	1.2	
Chromium	mg/kg-dry	5/18/2007 4:44:17 PM	6010B	1.1	8.8	
Lead	mg/kg-dry	5/18/2007 4:44:17 PM	6010B	5.5	74	
Mercury	mg/kg-dry	5/17/2007 2:10:09 PM	7471A	0.044	0.17	
Selenium	mg/kg-dry	5/17/2007 6:34:09 PM	6020	0.55	6.9	
Silver	mg/kg-dry	5/17/2007 6:34:09 PM	6020	0.55	0.78	

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-20A
Field Sample ID: F2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 6:39:32 PM	6020	0.61	9.8
Barium	mg/kg-dry	5/17/2007 6:39:32 PM	6020	2.5	280 *
Cadmium	mg/kg-dry	5/17/2007 6:39:32 PM	6020	0.49	0.79
Chromium	mg/kg-dry	5/18/2007 4:48:18 PM	6010B	1.2	7.6
Lead	mg/kg-dry	5/18/2007 4:48:18 PM	6010B	6.1	30
Mercury	mg/kg-dry	5/17/2007 2:17:42 PM	7471A	0.049	0.74
Selenium	mg/kg-dry	5/17/2007 6:39:32 PM	6020	0.61	6.0
Silver	mg/kg-dry	5/17/2007 6:39:32 PM	6020	0.61	< 0.61

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-21A

Field Sample ID: F3-SS1

Collected: 5/14/2007

Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 6:44:56 PM	6020	0.63	7.9
Barium	mg/kg-dry	5/17/2007 6:44:56 PM	6020	2.5	240 *
Cadmium	mg/kg-dry	5/17/2007 6:44:56 PM	6020	0.50	< 0.50
Chromium	mg/kg-dry	5/18/2007 4:52:19 PM	6010B	1.3	14
Lead	mg/kg-dry	5/18/2007 4:52:19 PM	6010B	6.3	26
Mercury	mg/kg-dry	5/17/2007 2:22:56 PM	7471A	0.049	< 0.049
Selenium	mg/kg-dry	5/17/2007 6:44:56 PM	6020	0.63	6.8
Silver	mg/kg-dry	5/17/2007 6:44:56 PM	6020	0.63	< 0.63

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-22A
Field Sample ID: G1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
Arsenic	mg/kg-dry	5/17/2007 6:50:20 PM	6020	0.55	6.7
Barium	mg/kg-dry	5/17/2007 6:50:20 PM	6020	2.2	210 *
Cadmium	mg/kg-dry	5/17/2007 6:50:20 PM	6020	0.44	< 0.44
Chromium	mg/kg-dry	5/18/2007 4:56:15 PM	6010B	1.1	11
Lead	mg/kg-dry	5/18/2007 4:56:15 PM	6010B	5.5	30
Mercury	mg/kg-dry	5/17/2007 2:25:25 PM	7471A	0.044	0.091
Selenium	mg/kg-dry	5/17/2007 6:50:20 PM	6020	0.55	6.5
Silver	mg/kg-dry	5/17/2007 6:50:20 PM	6020	0.55	< 0.55

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
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ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-23A
Field Sample ID: G2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
Arsenic	mg/kg-dry	5/17/2007 6:55:44 PM	6020	0.55	8.4
Barium	mg/kg-dry	5/17/2007 6:55:44 PM	6020	2.2	130 *
Cadmium	mg/kg-dry	5/17/2007 6:55:44 PM	6020	0.44	4.9
Chromium	mg/kg-dry	5/18/2007 5:00:14 PM	6010B	1.1	6.7
Lead	mg/kg-dry	5/18/2007 5:00:14 PM	6010B	5.5	51
Mercury	mg/kg-dry	5/17/2007 2:27:54 PM	7471A	0.044	0.12
Selenium	mg/kg-dry	5/17/2007 6:55:44 PM	6020	0.55	7.0
Silver	mg/kg-dry	5/17/2007 6:55:44 PM	6020	0.55	< 0.55

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-24A
Field Sample ID: G3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
Arsenic	mg/kg-dry	5/17/2007 7:01:08 PM	6020	0.56	5.6
Barium	mg/kg-dry	5/17/2007 7:01:08 PM	6020	2.2	160 *
Cadmium	mg/kg-dry	5/17/2007 7:01:08 PM	6020	0.45	0.78
Chromium	mg/kg-dry	5/18/2007 5:04:12 PM	6010B	1.1	8.0
Lead	mg/kg-dry	5/18/2007 5:04:12 PM	6010B	5.6	48
Mercury	mg/kg-dry	5/17/2007 2:30:24 PM	7471 A	0.045	0.071
Selenium	mg/kg-dry	5/17/2007 7:01:08 PM	6020	0.56	6.2
Silver	mg/kg-dry	5/17/2007 7:01:08 PM	6020	0.56	< 0.56

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-25A
Field Sample ID: H1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 7:06:33 PM	6020	0.54	7.3
Barium	mg/kg-dry	5/17/2007 7:06:33 PM	6020	2.2	130 *
Cadmium	mg/kg-dry	5/17/2007 7:06:33 PM	6020	0.43	1.2
Chromium	mg/kg-dry	5/18/2007 5:08:10 PM	6010B	1.1	8.4
Lead	mg/kg-dry	5/18/2007 5:08:10 PM	6010B	5.4	83
Mercury	mg/kg-dry	5/17/2007 2:32:55 PM	7471A	0.043	0.11
Selenium	mg/kg-dry	5/17/2007 7:06:33 PM	6020	0.54	6.6
Silver	mg/kg-dry	5/17/2007 7:06:33 PM	6020	0.54	0.71

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-26A
Field Sample ID: H2-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 7:11:56 PM	6020	0.54	5.4
Barium	mg/kg-dry	5/17/2007 7:11:56 PM	6020	2.1	86 *
Cadmium	mg/kg-dry	5/17/2007 7:11:56 PM	6020	0.43	2.1
Chromium	mg/kg-dry	5/18/2007 5:12:08 PM	6010B	1.1	8.6
Lead	mg/kg-dry	5/18/2007 5:12:08 PM	6010B	5.4	61
Mercury	mg/kg-dry	5/17/2007 2:35:27 PM	7471A	0.043	0.11
Selenium	mg/kg-dry	5/17/2007 7:11:56 PM	6020	0.54	5.1
Silver	mg/kg-dry	5/17/2007 7:11:56 PM	6020	0.54	< 0.54

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-27A
Field Sample ID: H3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date	Method	Reporting	Analytical
		Analyzed	Used	Limit	Results
Arsenic	mg/kg-dry	5/17/2007 7:17:20 PM	6020	0.54	5.2
Barium	mg/kg-dry	5/17/2007 7:17:20 PM	6020	2.2	210 *
Cadmium	mg/kg-dry	5/17/2007 7:17:20 PM	6020	0.43	0.46
Chromium	mg/kg-dry	5/18/2007 5:16:03 PM	6010B	1.1	11
Lead	mg/kg-dry	5/18/2007 5:16:03 PM	6010B	5.4	32
Mercury	mg/kg-dry	5/17/2007 2:37:59 PM	7471A	0.042	0.059
Selenium	mg/kg-dry	5/17/2007 7:17:20 PM	6020	0.54	7.2
Silver	mg/kg-dry	5/17/2007 7:17:20 PM	6020	0.54	< 0.54

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-28A
Field Sample ID: I1-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 7:33:30 PM	6020	0.53	6.7
Barium	mg/kg-dry	5/17/2007 7:33:30 PM	6020	2.1	190 *
Cadmium	mg/kg-dry	5/17/2007 7:33:30 PM	6020	0.42	1.3
Chromium	mg/kg-dry	5/18/2007 5:20:00 PM	6010B	1.1	7.0
Lead	mg/kg-dry	5/18/2007 5:20:00 PM	6010B	5.3	84
Mercury	mg/kg-dry	5/17/2007 2:40:32 PM	7471A	0.042	0.26
Selenium	mg/kg-dry	5/17/2007 7:33:30 PM	6020	0.53	5.8
Silver	mg/kg-dry	5/17/2007 7:33:30 PM	6020	0.53	0.69

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-29A

Field Sample ID: I2-SS1

Collected: 5/14/2007

Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 7:38:54 PM	6020	0.83	4.5
Barium	mg/kg-dry	5/17/2007 7:38:54 PM	6020	3.3	170 *
Cadmium	mg/kg-dry	5/17/2007 7:38:54 PM	6020	0.66	< 0.66
Chromium	mg/kg-dry	5/19/2007 12:47:14 PM	6010B	1.7	9.0
Lead	mg/kg-dry	5/18/2007 5:31:53 PM	6010B	8.3	28
Mercury	mg/kg-dry	5/17/2007 2:43:02 PM	7471A	0.066	< 0.066
Selenium	mg/kg-dry	5/17/2007 7:38:54 PM	6020	0.83	6.8
Silver	mg/kg-dry	5/17/2007 7:38:54 PM	6020	0.83	< 0.83

* The reporting limits were raised due to sample matrix interference.

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INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 0356-022

Contact: Jack Elder

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Lab Sample ID: L77825-30A
Field Sample ID: I3-SS1
Collected: 5/14/2007
Received: 5/14/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/17/2007 7:44:18 PM	6020	0.56	5.4
Barium	mg/kg-dry	5/17/2007 7:44:18 PM	6020	2.2	240 *
Cadmium	mg/kg-dry	5/17/2007 7:44:18 PM	6020	0.45	0.54
Chromium	mg/kg-dry	5/19/2007 12:51:10 PM	6010B	1.1	10
Lead	mg/kg-dry	5/18/2007 5:35:49 PM	6010B	5.6	39
Mercury	mg/kg-dry	5/17/2007 2:50:34 PM	7471A	0.044	0.054
Selenium	mg/kg-dry	5/17/2007 7:44:18 PM	6020	0.56	7.6
Silver	mg/kg-dry	5/17/2007 7:44:18 PM	6020	0.56	< 0.56

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AMERICAN WEST ANALYTICAL LABORATORIES

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QC SUMMARY REPORT

CLIENT: Granite Environmental
Work Order: L77825
Project: Pace Ranch / 0356-022

Dept: ME

SampType: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qualifiers	Analysis Date
LCS-34645	Arsenic	mg/kg	6020	18.88	20	0	94.4	85-115				5/17/2007
LCS-34645	Barium	mg/kg	6020	20.07	20	0.1188	99.7	85-115				5/17/2007
LCS-34645	Cadmium	mg/kg	6020	18.83	20	0	94.1	85-115				5/17/2007
LCS-34645	Selenium	mg/kg	6020	17.08	20	0	85.4	85-115				5/17/2007
LCS-34645	Silver	mg/kg	6020	19.57	20	0	97.8	85-115				5/17/2007
LCS-34646	Arsenic	mg/kg	6020	19.04	20	0	95.2	85-115				5/17/2007
LCS-34646	Barium	mg/kg	6020	20.05	20	0	100	85-115				5/17/2007
LCS-34646	Cadmium	mg/kg	6020	19.15	20	0.005451	95.7	85-115				5/17/2007
LCS-34646	Selenium	mg/kg	6020	17.33	20	0	86.7	85-115				5/17/2007
LCS-34646	Silver	mg/kg	6020	19.78	20	0	98.9	85-115				5/17/2007
LCS-34700	Mercury	mg/kg	7471A	0.1993	0.2	0	99.7	80-120				5/17/2007
LCS-34701	Mercury	mg/kg	7471A	0.1994	0.2	0.005465	97.0	80-120				5/17/2007
LCS-34645	Chromium	mg/kg	6010B	19.31	20	0	96.6	75-125				5/18/2007
LCS-34645	Lead	mg/kg	6010B	18.98	20	0	94.9	75-125				5/18/2007
LCS-34646	Chromium	mg/kg	6010B	18.92	20	0	94.6	75-125				5/18/2007
LCS-34646	Lead	mg/kg	6010B	18.22	20	0	91.1	75-125				5/18/2007

Report Date: 5/21/2007 Page 32 of 35



AMERICAN WEST ANALYTICAL LABORATORIES

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

QC SUMMARY REPORT

CLIENT: Granite Environmental
Work Order: L77825
Project: Pace Ranch / 0356-022

Dept: ME
SampType: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qualifiers	Analysis Date
MB-34645	Arsenic	mg/kg	6020	< 0.50				-				5/17/2007
MB-34645	Barium	mg/kg	6020	< 0.20				-				5/17/2007
MB-34645	Cadmium	mg/kg	6020	< 0.40				-				5/17/2007
MB-34645	Selenium	mg/kg	6020	< 0.50				-				5/17/2007
MB-34645	Silver	mg/kg	6020	< 0.50				-				5/17/2007
MB-34646	Arsenic	mg/kg	6020	< 0.50				-				5/17/2007
MB-34646	Barium	mg/kg	6020	< 0.20				-				5/17/2007
MB-34646	Cadmium	mg/kg	6020	< 0.40				-				5/17/2007
MB-34646	Selenium	mg/kg	6020	< 0.50				-				5/17/2007
MB-34646	Silver	mg/kg	6020	< 0.50				-				5/17/2007
MB-34700	Mercury	mg/kg	7471A	< 0.040				-				5/17/2007
MB-34701	Mercury	mg/kg	7471A	< 0.040				-				5/17/2007
MB-34645	Chromium	mg/kg	6010B	< 1.0				-				5/18/2007
MB-34645	Lead	mg/kg	6010B	< 5.0				-				5/18/2007
MB-34646	Chromium	mg/kg	6010B	< 1.0				-				5/18/2007
MB-34646	Lead	mg/kg	6010B	< 5.0				-				5/18/2007



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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

QC SUMMARY REPORT

CLIENT: Granite Environmental
Work Order: L77825
Project: Pace Ranch / 0356-022

Dept: ME

SampType: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qualifiers	Analysis Date
L77825-01AMS	Arsenic	mg/kg-dry	6020	57.61	21.88	38.73	86.3	70-130				5/17/2007
L77825-01AMS	Barium	mg/kg-dry	6020	98.06	21.88	74.19	109	70-130				5/17/2007
L77825-01AMS	Cadmium	mg/kg-dry	6020	27.27	21.88	7.211	91.7	70-130				5/17/2007
L77825-01AMS	Selenium	mg/kg-dry	6020	23.15	21.88	3.338	90.5	70-130				5/17/2007
L77825-01AMS	Silver	mg/kg-dry	6020	23.89	21.88	4.786	87.3	70-130				5/17/2007
L77825-16AMS	Arsenic	mg/kg-dry	6020	56.65	50.7	9.556	92.9	70-130				5/17/2007
L77825-16AMS	Barium	mg/kg-dry	6020	403.9	50.7	314.5	176	70-130			2	5/17/2007
L77825-16AMS	Cadmium	mg/kg-dry	6020	48.35	50.7	1.047	93.3	70-130				5/17/2007
L77825-16AMS	Selenium	mg/kg-dry	6020	53.69	50.7	11.91	82.4	70-130				5/17/2007
L77825-16AMS	Silver	mg/kg-dry	6020	48.60	50.7	0.5172	94.8	70-130				5/17/2007
L77825-01AMS	Mercury	mg/kg-dry	7471A	0.4025	0.221	0.2498	69.1	80-120			1	5/17/2007
L77825-16AMS	Mercury	mg/kg-dry	7471A	0.6576	0.5085	0.1663	96.6	80-120				5/17/2007
L77825-01AMS	Chromium	mg/kg-dry	6010B	24.83	21.88	4.425	93.3	75-125				5/18/2007
L77825-01AMS	Lead	mg/kg-dry	6010B	602.7	21.88	540.4	285	75-125			2	5/18/2007
L77825-16AMS	Chromium	mg/kg-dry	6010B	59.74	50.7	13.82	90.6	75-125				5/18/2007
L77825-16AMS	Lead	mg/kg-dry	6010B	91.19	50.7	44.98	91.2	75-125				5/18/2007

¹ Spike recovery indicates matrix interference. The method is in control as indicated by the laboratory control sample (LCS).

² Analyte concentration is too high for accurate spike and/or RPD recovery.

Report Date: 5/21/2007 Page 34 of 35



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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

QC SUMMARY REPORT

CLIENT: Granite Environmental
Work Order: L77825
Project: Pace Ranch / 0356-022

Dept: ME
SampType: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qualifiers	Analysis Date
L77825-01AMSD	Arsenic	mg/kg-dry	6020	45.12	22.01	38.73	29.1	70-130	24.3	20	¹ @	5/17/2007
L77825-01AMSD	Barium	mg/kg-dry	6020	112.5	22.01	74.19	174	70-130	13.7	20	²	5/17/2007
L77825-01AMSD	Cadmium	mg/kg-dry	6020	26.01	22.01	7.211	85.4	70-130	4.72	20		5/17/2007
L77825-01AMSD	Selenium	mg/kg-dry	6020	22.67	22.01	3.338	87.8	70-130	2.09	20		5/17/2007
L77825-01AMSD	Silver	mg/kg-dry	6020	23.45	22.01	4.786	84.8	70-130	1.84	20		5/17/2007
L77825-16AMSD	Arsenic	mg/kg-dry	6020	56.84	49.88	9.556	94.8	70-130	0.333	20		5/17/2007
L77825-16AMSD	Barium	mg/kg-dry	6020	408.0	49.88	314.5	188	70-130	1.01	20	²	5/17/2007
L77825-16AMSD	Cadmium	mg/kg-dry	6020	48.68	49.88	1.047	95.5	70-130	0.685	20		5/17/2007
L77825-16AMSD	Selenium	mg/kg-dry	6020	54.25	49.88	11.91	84.9	70-130	1.03	20		5/17/2007
L77825-16AMSD	Silver	mg/kg-dry	6020	49.20	49.88	0.5172	97.6	70-130	1.23	20		5/17/2007
L77825-01AMSD	Mercury	mg/kg-dry	7471A	0.3700	0.221	0.2498	54.4	80-120	8.42	20	¹	5/17/2007
L77825-16AMSD	Mercury	mg/kg-dry	7471A	0.7098	0.5085	0.1663	107	80-120	7.63	20		5/17/2007
L77825-01AMSD	Chromium	mg/kg-dry	6010B	25.31	22.01	4.425	94.9	75-125	1.92	20		5/18/2007
L77825-01AMSD	Lead	mg/kg-dry	6010B	419.2	22.01	540.4	-550	75-125	35.9	20	²	5/18/2007
L77825-16AMSD	Chromium	mg/kg-dry	6010B	60.83	49.88	13.82	94.2	75-125	1.81	20		5/18/2007
L77825-16AMSD	Lead	mg/kg-dry	6010B	95.67	49.88	44.98	102	75-125	4.79	20		5/18/2007

@ High RPD due to suspected matrix interference.

¹ Spike recovery indicates matrix interference. The method is in control as indicated by the laboratory control sample (LCS).

² Analyte concentration is too high for accurate spike and/or RPD recovery.

Report Date: 5/21/2007 Page 35 of 35



May 30, 2007

Walter Plumb III
90 South 400 West #360
Salt Lake City, Utah 84101

Subject: Results of Composite Sampling
Pace Ranch
Summit County, Utah
Granite Project No. 0356-022

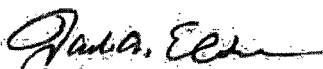
Dear Mr. Plumb:

The previous round of sampling conducted at Pace Ranch (and reported to you on May 24, 2007) revealed two locations of concern. These were sample locations A-2 (extreme northeast property corner at site of old cattle corral and loading area called Atkinson), where lead was over the target concentration of 400 ppm, and B-3, in the same general area, where arsenic was over 23 ppm arbitrary threshold set in the report by DERR.

On May 25, 2007, Granite collected a five point composite sampling surrounding both A-2 and B-3 and submitted them to American West Analytical Laboratories for analysis of the 8 RCRA metals, in order to ascertain what the average lead (A-2) and arsenic (B-3) values were at these respective locations. The results show an average lead concentration of 380 ppm at A-2 and arsenic at 23 ppm at B-3. It is Granite's conclusion that the Pace Ranch property, which you own, has had little in the way of metals enhancement, due to nearby ore milling operations, and that the property presents no risk to future inhabitants from these historic activities.

Sincerely,

Granite Environmental


Jack A. Elder, Ph.D.
President

Attachments



**AMERICAN
WEST
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Salt Lake City, Utah
84115

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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

May 29, 2007

Jack Elder
Granite Environmental
6084 South 900 East, Suite 102
Salt Lake City, UT 84121

TEL: (801) 943-1222

FAX: (801) 943-1288

RE: Pace Ranch / 356-022

Lab Set ID: L77989

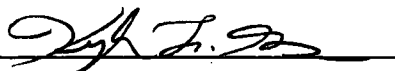
Dear Jack Elder:

American West Analytical Labs received 2 samples on 5/24/2007 for the analyses presented in the following report.

All analyses were performed in accordance to National Environmental Laboratory Accreditation Program (NELAP) protocols unless noted otherwise. If you have any questions or concerns regarding this report please feel free to call.

Thank you.

Approved by:


Laboratory Director or designee

Report Date: 5/29/2007 Page 1 of 3



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 356-022

Contact: Jack Elder

**AMERICAN
WEST
ANALYTICAL
LABORATORIES**

Lab Sample ID: L77989-01A
Field Sample ID: A-2 Comp
Collected: 5/23/2007
Received: 5/24/2007

TOTAL METALS

463 West 3600 South
Salt Lake City, Utah
84115

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/29/2007 12:53:25 PM	6020	0.54	17
Barium	mg/kg-dry	5/29/2007 12:53:25 PM	6020	2.2	170 ^{* 2}
Cadmium	mg/kg-dry	5/29/2007 12:53:25 PM	6020	0.44	2.6
Chromium	mg/kg-dry	5/24/2007 8:16:30 PM	6010B	1.1	10
Lead	mg/kg-dry	5/24/2007 8:16:30 PM	6010B	5.4	380 ²
Mercury	mg/kg-dry	5/29/2007 11:45:45 AM	7471A	0.22	0.81
Selenium	mg/kg-dry	5/29/2007 12:53:25 PM	6020	0.54	7.4
Silver	mg/kg-dry	5/29/2007 12:53:25 PM	6020	0.54	2.1

² Analyte concentration is too high for accurate spike and/or RPD recovery.

* The reporting limits were raised due to sample matrix interference.

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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer



INORGANIC ANALYSIS REPORT

Client: Granite Environmental
Project ID: Pace Ranch / 356-022

Contact: Jack Elder

**AMERICAN
WEST
ANALYTICAL
LABORATORIES**

Lab Sample ID: L77989-02A
Field Sample ID: B-3 Comp
Collected: 5/23/2007
Received: 5/24/2007

TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Results
Arsenic	mg/kg-dry	5/29/2007 1:20:19 PM	6020	0.77	23
Barium	mg/kg-dry	5/29/2007 1:20:19 PM	6020	3.1	370 *
Cadmium	mg/kg-dry	5/29/2007 1:20:19 PM	6020	0.62	1.8
Chromium	mg/kg-dry	5/24/2007 8:40:25 PM	6010B	1.5	11
Lead	mg/kg-dry	5/24/2007 8:40:25 PM	6010B	7.7	200
Mercury	mg/kg-dry	5/29/2007 11:26:27 AM	7471A	0.061	0.24
Selenium	mg/kg-dry	5/29/2007 1:20:19 PM	6020	0.77	8.7
Silver	mg/kg-dry	5/29/2007 1:20:19 PM	6020	0.77	2.0

* The reporting limits were raised due to sample matrix interference.

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Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

American West Analytical Labs

WORK ORDER Summary

Client ID: GRA100

QC Level: 1

Project: Pace Ranch / 356-022

Location: *to SW DB*

Comments: 2 Day Rush; QCLevel: 1; Client asked for 2-Day Rush, but told it might take longer.

email
5/29/07
24-May-07

Work Order L77989

Contact: Jack Elder *DB*

RUSH

Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Storage	
L77989-01A	A-2 Comp	5/23/2007	5/24/2007	5/29/2007	Soil	3051A-ICPMS	May 24 - met	1
				5/29/2007		6020-S	May 24 - met	1
				5/29/2007		Hg-prep-S	May 24 - met	1
				5/29/2007		HG-S	May 24 - met	1
				5/29/2007		ICP-S	May 24 - met	1
				5/29/2007		PMOIST	May 24 - met	1
L77989-02A	B-3 Comp			5/29/2007		3051A-ICPMS	May 24 - met	1
				5/29/2007		6020-S	May 24 - met	1
				5/29/2007		Hg-prep-S	May 24 - met	1
				5/29/2007		HG-S	May 24 - met	1
				5/29/2007		ICP-S	May 24 - met	1
				5/29/2007		PMOIST	May 24 - met	1

Client Granite Environ.
Address _____

City _____ State _____ Zip _____
Phone 506-0651 Fax 506-0654

Contact _____

E-mail jelder@granite-enviro.com

Project Name Pan Rock

Project Number/P.O.# 356-022

Sampler Name _____



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Salt Lake City, Utah

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CHAIN OF CUSTODY

Lab Sample Set # 77989

Page 1 of 1

Turn Around Time (Circle One)

1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	RECEIVED METALS	QC LEVEL			COMMENTS	LABORATORY USE ONLY	
					1	2	2+		SAMPLES WERE:	
A-2 comp	23 May	S	1	X					1 Shipped or hand delivered Notes:	
B-3 comp	"	"	"	"					2 Ambient or Chilled Notes:	
									3 Temperature <u>25°</u>	
									4 Received Broken/Leaking (Improperly Sealed) Y <u>N</u> Notes:	
									5 Properly Preserved Y <u>N</u> Notes:	
									6 Received Within Holding Times Y <u>N</u> Notes:	
									COC Tape Was:	
									1 Present on Outer Package Y <u>N</u> NA	
									2 Unbroken on Outer Package Y <u>N</u> NA	
									3 Present on Sample Y <u>N</u> NA	
									4 Unbroken on Sample Y <u>N</u> NA Notes:	
									Discrepancies Between Sample Labels and COC Record? Y <u>N</u> Notes:	

Relinquished By: Signature	Date	Received By: Signature	Special Instructions:
<u>Jack A. Elder</u>	<u>24 May 07</u>	<u>Denise Bruun</u>	<u>client informed it might take longer than 2-3 days</u> <u>DB 5/24/07</u>
PRINT NAME	Time	PRINT NAME	
<u>Jack A. Elder</u>	<u>1021</u>	<u>Denise Bruun</u>	
PRINT NAME	Time	PRINT NAME	
Relinquished By: Signature	Date	Received By: Signature	
PRINT NAME	Time	PRINT NAME	
Relinquished By: Signature	Date	Received By: Signature	
PRINT NAME	Time	PRINT NAME	
Relinquished By: Signature	Date	Received By: Signature	
PRINT NAME	Time	PRINT NAME	

Appendix B
Laboratory Analytical Reports



Laurie Goldner
Sage Environmental, LLC
807 East South Temple, Suite 100
Salt Lake City, UT 84102
TEL: (801) 322-2050

RE: Silver Gate Ranches

Dear Laurie Goldner:

Lab Set ID: 1401515

463 West 3600 South
Salt Lake City, UT 84115

American West Analytical Laboratories received 46 sample(s) on 1/30/2014 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com
web: www.awal-labs.com

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by: _____
Laboratory Director or designee



Inorganic Case Narrative

Client:
Contact:
Project:
Lab Set ID:

Sage Environmental, LLC
Laurie Goldner
Silver Gate Ranches
1401515

463 West 3600 South
Salt Lake City, UT 84115

Sample Receipt Information:

Date of Receipt: 1/30/2014
Date of Collection: 1/29/2014
Sample Condition: Intact
C-O-C Discrepancies: None

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1401515-001A	Lead	MS/MSD	High analyte concentration
1401515-011A	Lead	MS/MSD/RPD	Sample non-homogeneity
1401515-032A	Lead	MS/MSD	Sample non-homogeneity

Corrective Action: None required.



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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Sage Environmental, LLC

Lab Set ID: 1401515

Project: Silver Gate Ranches

Contact: Laurie Goldner

Received Date: 1/30/2014 1450h

Lead

Method Used: SW6020A

Lab Sample ID	Client Sample ID	Collection Date	Date Prepared	Date Analyzed	Units	Reporting Limit	Analytical Result	Qual
1401515-001A	SGR-01 (0"-2")	1/29/2014 928h	1/31/2014 1115h	2/4/2014 1828h	mg/kg-dry	7.40	273	2
1401515-002A	SGR-01 (2"-12")	1/29/2014 930h	1/31/2014 1115h	2/4/2014 1855h	mg/kg-dry	7.28	80.5	
1401515-003A	SGR-01B (0"-6")	1/29/2014 935h	1/31/2014 1115h	2/4/2014 1900h	mg/kg-dry	7.26	9.47	
1401515-004A	SGR-02 (0"-2")	1/29/2014 950h	1/31/2014 1115h	2/4/2014 1921h	mg/kg-dry	8.87	355	
1401515-005A	SGR-02 (2"-12")	1/29/2014 952h	1/31/2014 1115h	2/4/2014 1926h	mg/kg-dry	7.59	64.1	
1401515-006A	SGR-02B (0"-6")	1/29/2014 957h	1/31/2014 1115h	2/4/2014 1932h	mg/kg-dry	7.10	13.4	
1401515-007A	SGR-03 (0"-2")	1/29/2014 1035h	1/31/2014 1115h	2/5/2014 1603h	mg/kg-dry	40.4	1,270	
1401515-008A	SGR-03 (2"-12")	1/29/2014 1037h	1/31/2014 1115h	2/4/2014 1942h	mg/kg-dry	7.17	13.6	
1401515-009A	SGR-03B (0"-6")	1/29/2014 1045h	1/31/2014 1115h	2/4/2014 1948h	mg/kg-dry	7.88	54.6	
1401515-010A	SGR-04 (0"-2")	1/29/2014 1050h	1/31/2014 1115h	2/4/2014 1953h	mg/kg-dry	8.57	250	
1401515-011A	SGR-04 (2"-12")	1/29/2014 1052h	1/31/2014 1535h	2/7/2014 121h	mg/kg-dry	7.64	116	3
1401515-012A	SGR-04B (0"-6")	1/29/2014 1055h	1/31/2014 1535h	2/7/2014 148h	mg/kg-dry	9.08	46.4	
1401515-013A	SGR-05 (0"-2")	1/29/2014 1112h	1/31/2014 1535h	2/7/2014 153h	mg/kg-dry	10.2	183	
1401515-014A	SGR-05 (2"-12")	1/29/2014 1115h	1/31/2014 1535h	2/7/2014 158h	mg/kg-dry	8.30	134	
1401515-015A	SGR-05B (0"-6")	1/29/2014 1117h	1/31/2014 1535h	2/7/2014 220h	mg/kg-dry	8.28	195	
1401515-016A	SGR-06 (0"-2")	1/29/2014 1125h	1/31/2014 1535h	2/7/2014 225h	mg/kg-dry	8.97	238	
1401515-017A	SGR-06 (2"-12")	1/29/2014 1127h	1/31/2014 1535h	2/7/2014 230h	mg/kg-dry	9.69	150	
1401515-018A	SGR-06B (0"-6")	1/29/2014 1130h	1/31/2014 1535h	2/7/2014 236h	mg/kg-dry	7.01	448	
1401515-019A	SGR-07 (0"-2")	1/29/2014 1140h	1/31/2014 1535h	2/7/2014 241h	mg/kg-dry	13.1	121	

Report Date: 2/12/2014 Page 3 of 9



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Sage Environmental, LLC

Lab Set ID: 1401515

Project: Silver Gate Ranches

Contact: Laurie Goldner

Received Date: 1/30/2014 1450h

Lead

Method Used: SW6020A

Lab Sample ID	Client Sample ID	Collection Date	Date Prepared	Date Analyzed	Units	Reporting Limit	Analytical Result	Qual
1401515-020A	SGR-07 (2"-12")	1/29/2014 1142h	1/31/2014 1535h	2/7/2014 246h	mg/kg-dry	8.82	49.3	
1401515-021A	SGR-07B (0"-6")	1/29/2014 1145h	1/31/2014 1535h	2/7/2014 251h	mg/kg-dry	9.55	60.6	
1401515-022A	SGR-08 (0"-2")	1/29/2014 1150h	1/31/2014 1535h	2/7/2014 257h	mg/kg-dry	9.49	25.9	
1401515-023A	SGR-08 (2"-12")	1/29/2014 1155h	1/31/2014 1535h	2/7/2014 302h	mg/kg-dry	10.5	48.4	
1401515-024A	SGR-08B (0"-6")	1/29/2014 1200h	1/31/2014 1535h	2/7/2014 307h	mg/kg-dry	7.62	46.6	
1401515-025A	SGR-09 (0"-2")	1/29/2014 1305h	1/31/2014 1535h	2/7/2014 328h	mg/kg-dry	11.7	123	
1401515-026A	SGR-09 (2"-12")	1/29/2014 1307h	1/31/2014 1535h	2/7/2014 334h	mg/kg-dry	9.86	14.2	
1401515-027A	SGR-10 (0"-2")	1/29/2014 1315h	1/31/2014 1535h	2/7/2014 339h	mg/kg-dry	11.0	633	
1401515-028A	SGR-10 (2"-12")	1/29/2014 1317h	1/31/2014 1535h	2/7/2014 344h	mg/kg-dry	9.83	42.2	
1401515-029A	SGR-11 (0"-2")	1/29/2014 1327h	1/31/2014 1535h	2/7/2014 350h	mg/kg-dry	11.0	224	
1401515-030A	SGR-11 (2"-12")	1/29/2014 1330h	1/31/2014 1535h	2/7/2014 355h	mg/kg-dry	8.65	122	
1401515-031A	SGR-12 (0"-2")	1/29/2014 1355h	1/31/2014 1745h	2/7/2014 1055h	mg/kg-dry	11.8	131	
1401515-032A	SGR-12 (2"-12")	1/29/2014 1400h	1/31/2014 1745h	2/7/2014 1100h	mg/kg-dry	8.14	67.7	
1401515-033A	SGR-13 (0"-2")	1/29/2014 1411h	1/31/2014 1745h	2/7/2014 1127h	mg/kg-dry	9.78	50.8	
1401515-034A	SGR-13 (2"-12")	1/29/2014 1415h	1/31/2014 1745h	2/7/2014 1132h	mg/kg-dry	7.84	36.8	
1401515-035A	SGR-14 (0"-2")	1/29/2014 1420h	1/31/2014 1745h	2/7/2014 1153h	mg/kg-dry	8.92	94.0	
1401515-036A	SGR-14 (2"-12")	1/29/2014 1425h	1/31/2014 1745h	2/7/2014 1159h	mg/kg-dry	7.80	79.2	
1401515-037A	SGR-15 (0"-2")	1/29/2014 1430h	1/31/2014 1745h	2/7/2014 1204h	mg/kg-dry	9.67	42.3	
1401515-038A	SGR-15 (2"-12")	1/29/2014 1435h	1/31/2014 1745h	2/7/2014 1209h	mg/kg-dry	7.50	25.6	

Report Date: 2/12/2014 Page 4 of 9

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Sage Environmental, LLC
Lab Set ID: 1401515
Project: Silver Gate Ranches

Contact: Laurie Goldner
Received Date: 1/30/2014 1450h

Lead

Method Used: SW6020A

Lab Sample ID	Client Sample ID	Collection Date		Date Prepared		Date Analyzed		Units	Reporting Limit	Analytical Result	Qual
1401515-039A	SGR-16 (0"-2")	1/29/2014	1441h	1/31/2014	1745h	2/7/2014	1215h	mg/kg-dry	8.60	447	
1401515-040A	SGR-16 (2"-12")	1/29/2014	1447h	1/31/2014	1745h	2/7/2014	1220h	mg/kg-dry	7.75	58.0	
1401515-041A	SGR-17 (0"-2")	1/29/2014	1455h	1/31/2014	1745h	2/10/2014	1427h	mg/kg-dry	17.3	885	
1401515-042A	SGR-17 (2"-12")	1/29/2014	1458h	1/31/2014	1745h	2/11/2014	458h	mg/kg-dry	32.1	1,870	
1401515-043A	SGR-18 (0"-2")	1/29/2014	1505h	1/31/2014	1745h	2/7/2014	1236h	mg/kg-dry	8.99	215	
1401515-044A	SGR-18 (2"-12")	1/29/2014	1509h	1/31/2014	1745h	2/7/2014	1241h	mg/kg-dry	8.01	79.2	
1401515-045A	SGR-19 (0"-2")	1/29/2014	1515h	1/31/2014	1745h	2/7/2014	1302h	mg/kg-dry	8.94	526	
1401515-046A	SGR-19 (2"-12")	1/29/2014	1520h	1/31/2014	1745h	2/10/2014	1433h	mg/kg-dry	28.7	1,490	

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

³ - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Sage Environmental, LLC
Lab Set ID: 1401515
Project: Silver Gate Ranches

Contact: Laurie Goldner
Dept: ME
QC Type: LCS

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	LCS-30280	Date Analyzed:	02/04/2014 1714h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1115h											
Lead		18.4	mg/kg	SW6020A	1.29	6.50	20.00	0	91.9	85 - 115				
Lab Sample ID:	LCS-30285	Date Analyzed:	02/07/2014 116h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1535h											
Lead		18.8	mg/kg	SW6020A	1.29	6.50	20.00	0	94.1	85 - 115				
Lab Sample ID:	LCS-30287	Date Analyzed:	02/07/2014 1050h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1745h											
Lead		17.7	mg/kg	SW6020A	1.29	6.50	20.00	0	88.5	85 - 115				



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Jose Rocha
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QC SUMMARY REPORT

Client: Sage Environmental, LLC
Lab Set ID: 1401515
Project: Silver Gate Ranches

Contact: Laurie Goldner
Dept: ME
QC Type: MBLK

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	MB-30280	Date Analyzed:	02/04/2014 1708h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1115h											
Lead		< 0.650	mg/kg	SW6020A	0.129	0.650								
Lab Sample ID:	MB-30285	Date Analyzed:	02/07/2014 1111h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1535h											
Lead		< 6.50	mg/kg	SW6020A	1.29	6.50								
Lab Sample ID:	MB-30287	Date Analyzed:	02/07/2014 1044h											
Test Code:	6020-S	Date Prepared:	01/31/2014 1745h											
Lead		< 6.50	mg/kg	SW6020A	1.29	6.50								



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Jose Rocha
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QC SUMMARY REPORT

Client: Sage Environmental, LLC
Lab Set ID: 1401515
Project: Silver Gate Ranches

Contact: Laurie Goldner
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1401515-001AMS		Date Analyzed: 02/04/2014 1844h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1115h											
Lead	251	mg/kg-dry	SW6020A	1.56	7.85	24.17	273	-89.9	75 - 125				²
Lab Sample ID: 1401515-011AMS		Date Analyzed: 02/07/2014 137h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1535h											
Lead	96.2	mg/kg-dry	SW6020A	1.63	8.21	25.25	116	-78.8	75 - 125				³
Lab Sample ID: 1401515-032AMS		Date Analyzed: 02/07/2014 1116h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1745h											
Lead	58.5	mg/kg-dry	SW6020A	1.56	7.85	24.15	67.7	-38.0	75 - 125				³

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³ - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.



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QC SUMMARY REPORT

Client: Sage Environmental, LLC
Lab Set ID: 1401515
Project: Silver Gate Ranches

Contact: Laurie Goldner
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1401515-001AMSD		Date Analyzed: 02/04/2014 1849h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1115h											
Lead	260	mg/kg-dry	SW6020A	1.52	7.68	23.64	273	-53.5	75 - 125	251	3.55	20	²
Lab Sample ID: 1401515-011AMSD		Date Analyzed: 02/07/2014 142h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1535h											
Lead	68.5	mg/kg-dry	SW6020A	1.59	7.99	24.58	116	-194	75 - 125	96.2	33.7	20	³
Lab Sample ID: 1401515-032AMSD		Date Analyzed: 02/07/2014 1122h											
Test Code: 6020-S		Date Prepared: 01/31/2014 1745h											
Lead	68.6	mg/kg-dry	SW6020A	1.52	7.66	23.58	67.7	3.92	75 - 125	58.5	15.9	20	³

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

³ - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

American West Analytical Laboratories

UL

WORK ORDER Summary

Work Order: **1401515**

Page 1 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/2014

Client ID: SAG100

Contact: Laurie Goldner

Project: Silver Gate Ranches

QC Level: III

WO Type: Standard

Comments: QC3;

eh

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-001A	SGR-01 (0"-2")	1/29/2014 0928h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-002A	SGR-01 (2"-12")	1/29/2014 0930h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-003A	SGR-01B (0"-6")	1/29/2014 0935h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-004A	SGR-02 (0"-2")	1/29/2014 0950h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-005A	SGR-02 (2"-12")	1/29/2014 0952h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-006A	SGR-02B (0"-6")	1/29/2014 0957h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-007A	SGR-03 (0"-2")	1/29/2014 1035h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-008A	SGR-03 (2"-12")	1/29/2014 1037h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	

Printed: 1/30/2014

FOR LABORATORY USE ONLY [fill out on page 1]:

%M ☒ RT ☒ CN ☒ TAT ☒ QC ☒ HOK ☐ HOK ☐ HOK ☐ COC Emailed ☐

WORK ORDER SummaryWork Order: **1401515** Page 2 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/14

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-009A	SGR-03B (0"-6")	1/29/2014 1045h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-010A	SGR-04 (0"-2")	1/29/2014 1050h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-011A	SGR-04 (2"-12")	1/29/2014 1052h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-012A	SGR-04B (0"-6")	1/29/2014 1055h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-013A	SGR-05 (0"-2")	1/29/2014 1112h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-014A	SGR-05 (2"-12")	1/29/2014 1115h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-015A	SGR-05B (0"-6")	1/29/2014 1117h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-016A	SGR-06 (0"-2")	1/29/2014 1125h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-017A	SGR-06 (2"-12")	1/29/2014 1127h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-018A	SGR-06B (0"-6")	1/29/2014 1130h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1

WORK ORDER Summary

Work Order: **1401515** Page 3 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-018A	SGR-06B (0"-6")	1/29/2014 1130h	1/30/2014 1450h	6020-S 1 SEL Analytes: PB	Soil	<input checked="" type="checkbox"/>	df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-019A	SGR-07 (0"-2")	1/29/2014 1140h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-020A	SGR-07 (2"-12")	1/29/2014 1142h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-021A	SGR-07B (0"-6")	1/29/2014 1145h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-022A	SGR-08 (0"-2")	1/29/2014 1150h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-023A	SGR-08 (2"-12")	1/29/2014 1155h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-024A	SGR-08B (0"-6")	1/29/2014 1200h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-025A	SGR-09 (0"-2")	1/29/2014 1305h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-026A	SGR-09 (2"-12")	1/29/2014 1307h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-027A	SGR-10 (0"-2")	1/29/2014 1315h	1/30/2014 1450h	3051A-ICPMS-PR 6020-S 1 SEL Analytes: PB	Soil	<input type="checkbox"/> <input checked="" type="checkbox"/>	df / metals df / metals	1

Printed: 1/30/2014

FOR LABORATORY USE ONLY [fill out on page 1]: %M ☐ RT ☐ CN ☐ TAT ☐ QC ☐ HOK ☐ HOK ☐ HOK ☐ COC Emailed ☐

WORK ORDER Summary

Work Order: **1401515** Page 4 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-027A	SGR-10 (0"-2")	1/29/2014 1315h	1/30/2014 1450h	PMOIST	Soil	<input type="checkbox"/>	df / metals	1
1401515-028A	SGR-10 (2"-12")	1/29/2014 1317h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-029A	SGR-11 (0"-2")	1/29/2014 1327h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-030A	SGR-11 (2"-12")	1/29/2014 1330h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-031A	SGR-12 (0"-2")	1/29/2014 1355h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-032A	SGR-12 (2"-12")	1/29/2014 1400h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-033A	SGR-13 (0"-2")	1/29/2014 1411h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-034A	SGR-13 (2"-12")	1/29/2014 1415h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-035A	SGR-14 (0"-2")	1/29/2014 1420h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-036A	SGR-14 (2"-12")	1/29/2014 1425h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	

WORK ORDER SummaryWork Order: **1401515**

Page 5 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/14

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-037A	SGR-15 (0"-2")	1/29/2014 1430h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-038A	SGR-15 (2"-12")	1/29/2014 1435h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-039A	SGR-16 (0"-2")	1/29/2014 1441h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-040A	SGR-16 (2"-12")	1/29/2014 1447h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-041A	SGR-17 (0"-2")	1/29/2014 1455h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-042A	SGR-17 (2"-12")	1/29/2014 1458h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-043A	SGR-18 (0"-2")	1/29/2014 1505h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-044A	SGR-18 (2"-12")	1/29/2014 1509h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-045A	SGR-19 (0"-2")	1/29/2014 1515h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1
				6020-S		<input checked="" type="checkbox"/>	df / metals	
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	
1401515-046A	SGR-19 (2"-12")	1/29/2014 1520h	1/30/2014 1450h	3051A-ICPMS-PR	Soil	<input type="checkbox"/>	df / metals	1

WORK ORDER Summary

Work Order: **1401515** Page 6 of 6

Client: Sage Environmental, LLC

Due Date: 2/13/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1401515-046A	SGR-19 (2"-12")	1/29/2014 1520h	1/30/2014 1450h	6020-S	Soil	<input checked="" type="checkbox"/>	df / metals	1
				1 SEL Analytes: PB				
				PMOIST		<input type="checkbox"/>	df / metals	

Lab Sample Set # 1401515

Client: **SAGE ENVIRONMENTAL**
Address: **807 East South Temple, STE. 100**

Contact: **LAURIE GOLDNER**
Phone: **(801)-322-2050**
Fax : **(801)-322-2052**

Page 1 of 1

Project Name: **SILVER GATE RANCHES**
PO#:

Email: LGOLDNER@SAGE-ENV.COM

QC Level: 3

Turn Around Time

due 2/13/14

[illegible]

Laboratory Use Only

Samples Were:

- 1 Shipped or hand delivered
2 Ambient or Chilled
3 Temperature 14
4 Received Broken/Leaking
(Improperly Sealed)

5 Properly Preserved

6 Received Within

Holding Times

Y N

COC Tape Was

- | | | | | |
|---|---------------------------|---|---|----|
| 1 | Present on Outer Package | Y | N | NA |
| 2 | Unbroken on Outer Package | Y | N | NA |
| 3 | Present on Sample | Y | N | NA |
| 4 | Unbroken on Sample | | | |

Discrepancies Between Sample

Labels and COC Record?

Special Instructions:

Relinquished by: <i>Signature</i> <i>Stephen A. Torpey</i> Print Name STEPHEN A. TORPEY	Date: 1-30-14 Time: 14:50	Received by: <i>Signature</i> <i>Amber Cluff</i> Print Name Amber Cluff	Date: 1/30/14 Time: 14:50
Relinquished by: <i>Signature</i> Print Name	Date: Time:	Received by: <i>Signature</i> Print Name	Date: Time:

American West Analytical Laboratories

Client: **SAGE ENVIRONMENTAL**
Address: **807 East South Temple, STE. 100**

Project Name: **SILVER GATE RANCHES**
PO#:

Chain of Custody

Contact: **LAURIE GOLDNER**

Phone: **(801)-322-2050**

Fax : **(801)-322-2052**

Email: LGOLDNER@SAGE-ENV.COM

Lab Sample Set #

Page 2 of 1

QC Level: **3**

Turn Around Time

due by 2/2/14

[illegible]

Special Instructions:

Relinquished by: <i>Signature</i>	Date: 1-30-14	Received by: <i>Signature</i>	Date: 1/30/14
Print Name: STEPHEN A. TORPEY	Time: 14:50	Print Name: Amber Cluff	Time: 14:50
Relinquished by: <i>Signature</i>	Date:	Received by: <i>Signature</i>	Date:
Print Name	Time:	Print Name	Time:

Lab Sample Set #

Client: **SAGE ENVIRONMENTAL**
Address: **807 East South Temple, STE. 100**

Contact: **LAURIE GOLDNER**

Phone: (801)-322-2050

Fax : (801)-322-2052

Email: LGOLDNER@SAGE-ENV.COM

Page 3 of 4

OC Level: **3**

Turn Around Time

Project Name: **SILVER GATE RANCHES**

PO#:

[illegible]

2-15

Laboratory Use Only

Samples Were:

- 1 Shipped or hand delivered ☒ Y ☐ N
- 2 Ambient or Chilled ☒ Y ☐ N
- 3 Temperature: 14
- 4 Received Broken/Leaking (Improperly Sealed) ☐ Y ☒ N
- 5 Properly Preserved ☒ Y ☐ N
- 6 Received Within Holding Times ☒ Y ☐ N

COC Tape Was:

- 1 Present on Outer Package ☐ Y ☐ N ☒ NA
- 2 Unbroken on Outer Package ☐ Y ☐ N ☒ NA
- 3 Present on Sample ☐ Y ☐ N ☒ NA
- 4 Unbroken on Sample ☐ Y ☐ N ☒ NA

Discrepancies Between Sample Labels and COC Record?

☐ Y ☒ N

Special Instructions:

Relinquished by: <i>Signature</i> <i>SA E</i>	Date: <i>1-30-2014</i>	Received by: <i>Signature</i> <i>Amber Cluff</i>	Date: <i>1/30/14</i>
Print Name <i>STEPHEN A. TORPEY</i>	Time: <i>14:50</i>	Print Name <i>Amber Cluff</i>	Time: <i>14:50</i>
Relinquished by: <i>Signature</i>	Date:	Received by: <i>Signature</i>	Date:
Print Name	Time:	Print Name	Time:

American West Analytical Laboratories

Client: **SAGE ENVIRONMENTAL**
Address: **807 East South Temple, STE. 100**

Project Name: **SILVER GATE RANCHES**
PO#:

Chain of Custody

Contact: **LAURIE GOLDNER**

Phone: **(801)-322-2050**

Fax : (801)-322-2052

Email: LGOLDNER@SAGE-ENV.COM

Lab Sample Set #

1401515

Page 4 of 24

QC Level: **3**

Turn Around Time

due 2/13/14

[illegible]

Special Instructions:

Relinquished by: <i>Signature</i> <i>[Signature]</i> A. Q.	Date: 1-30-2014	Received by: <i>Signature</i> <i>[Signature]</i> Amber Cluff	Date: 1/30/14
Print Name: STEPHEN A. TORPEY	Time: 14:50	Print Name: Amber Cluff	Time: 14:50
Relinquished by: <i>Signature</i>	Date:	Received by: <i>Signature</i>	Date:
Print Name	Time:	Print Name	Time:

Appendix C
GPS Coordinates of Sampling Locations

SILVER GATE RANCH GPS COORDINATES - 1/29/14

SGR-1	12T	0460334	4509426
SGR-2	12T	0460325	4509449
SGR-3	12T	0460278	4509435
SGR-4	12T	0460274	4509453
SGR-5	12T	0460167	4509449
SGR-6	12T	0460168	4509470
SGR-7	12T	0460041	4509457
SGR-8	12T	0460028	4509474
SGR-9	12T	0459974	4509474
SGR-10	12T	0459930	4509514
SGR-11	12T	0459903	4509547
SGR-12	12T	0459926	4509501
SGR-13	12T	0459901	4509512
SGR-14	12T	0459925	4509484
SGR-15	12T	0459901	4509490
SGR-16	12T	0459888	4509484
SGR-17	12T	0459938	4509979
SGR-17	12T	0459938	4509978
SGR-18	12T	0459935	4509973
SGR-19	12T	0459937	4509971
CULVERT J DITCH	12T	0460000	4509437